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REFERENCE TRACKING IN ETHIOPIAN SIGN LANGUAGE

by

Katelin Jo French
Bachelor of Arts, University of Kansas, 2013

A Thesis

Submitted to the Graduate Faculty

of the

University of North Dakota

In partial fulfillment of the requirements

for the degree of

Master of Arts

Grand Forks, North Dakota
December
2018

This thesis, submitted by Katelin French in partial fulfillment of the requirements for the Degree of Master of Arts from the University of North Dakota, has been read by the Faculty Advisory Committee under whom the work has been done and is hereby approved.

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This thesis meets the standards for appearance, conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

Grant McGimpsy
Dean of the School of Graduate Studies

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Name: Katelin French
Date: September 10, 2018

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LIST OF ABBREVIATIONS

∅	null
1	first person
2	second person
3	third person
3LP	The Three Little Pigs
ASL	American Sign Language
BHS	The Birth of his Son
BS	body shift
EG	eye gaze
FS	fingerspelling
HD	head nod
IX	point
NM	non-manual
NP	noun phrase
NTS	New Tire Story
P3	Pointy 3
POSS	possessive
RS	role shift
TH	Tortoise and the Hare
WM	The Washing Machine Story

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First, all my gratitude goes to Fasil. Without you this thesis would not be possible. You took the time to be kind to me, and there are no words to express how grateful I am for that. Thank you for sharing your life, your stories, your laughter, and your knowledge. From the bottom of my heart, በጥም አመሰግናለሁ.

My professors at SIL-UND have been invaluable to me. They have encouraged me, inspired me, pushed me, and actually given a hoot about me. I am thankful for their time and dedication to my education.

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ABSTRACT

Very little has been written about Ethiopian Sign Language, but the language has obvious differences from more well-studied signed languages. This thesis focuses on striking differences in reference tracking: looking at all the different referring types—lexical items, points, eye gaze, body shift, agreement, and zero reference—and their distribution throughout narrative texts. Through this process, Ethiopian Sign Language has proved different from expectations based on previously studied signed languages. This language uses loci with much more flexibility, depending on role shift alone to strongly establish loci for entities. Another way this language differs from other languages is its lack of entity classifiers. Research here also shows an intense dependence on local roles of entities. Entities that would typically be labeled as “main entities” or “props” in a global role are better analyzed at the local role level. When discourses are analyzed on a local role level, they meet expectations rather than upset them—fitting nicely with expectations for saliency marking. Body shift (versus role shift) is the referring type while role shift is simply a way to shift perspective—a framework within which reference tracking is performed.

To my friends. To my family. To my God.
I couldn't have done it without you.
Ad Astra Per Aspera



INTRODUCTION

1.1. About this Thesis

This thesis looks at how Ethiopian Sign Language handles referential tracking in narrative texts. It shows that the language handles referential tracking differently from “better-studied” sign languages such as American Sign Language (ASL). Most notable is its tendency to reintroduce characters repeatedly throughout a story with elaborate references. They may include combinations of nouns, extended repeating or trilling, eye gaze and/or point to a referential locus, and body shift. This can be understood more easily by considering role shift not as a referring expression, but rather as creating a context in which referring expressions are used. This all interacts with other unusual characteristics of the language, such as lack of obvious entity classifiers and the large amount of signing space a signer uses when telling a story. These unusual characteristics lead to a greatly increased and very prominent use of role shift in the referential structure.

1.2. Ethiopian Sign Language

Ethiopian Sign Language is used in Ethiopia by an estimated one million people (Tamene 2018). The language has two main dialects. One is found in Addis Ababa, Ethiopia’s capital, where many Deaf clubs and associations are centered. The other is associated with Hosaena School for the Deaf located in Hosaena, a town in the south. The dialect in Addis Ababa is more

heavily influenced by Amharic, the spoken language, than is the southern dialect, as evidenced by greater use of initialized signs, fingerspelling, and general grammatical influences.

Not much research has been done on the language. Most research looks at sociolinguistic aspects and language use (Tamene 2016, 2018). Tamene considers it a minor language in Ethiopia. Presumably, this is because it is used by a relatively small number of people and isn't an official language. Because most parents of the Deaf are hearing —about 96% — and do not know Ethiopian Sign Language, children learn it in Deaf schools and at Deaf clubs. The language is used throughout the entire nation and has a large stable signing community. It is used in a variety of settings including but not limited to television, a Bible translation, interpreting classes, and the National Association of the Deaf. Typically, Deaf community members in Ethiopia are “at least bilingual and sometimes multilingual as well” (Tamene 2018).



BACKGROUND

This chapter gives a short description of aspects of sign language that are well known in the literature, but not obvious if one has never studied sign language. This background is important to understand since Ethiopian Sign Language tends to differ from what is typically expected.

2.1. Loci

An important part of signed languages is their use of loci to refer to entities. In a typical signed language, one location in the signing space is associated with one entity and any reference to that space by way of pointing, eye gaze, body shift, and/or verb agreement is actually a reference to that entity. There are various ways for a locus to be set up, but the most typical would include a lexical sign and a point in a specific direction. In most signed languages, that location continues to refer to that entity, though the locus of an entity can change if it moves in the context of the story.

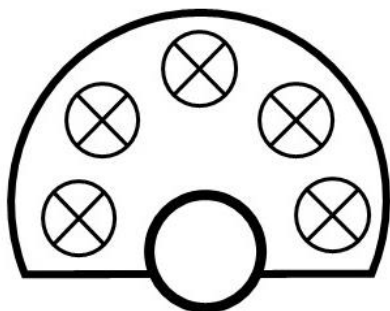


Figure 1 The signing space and some potential loci

Figure 1 shows top-down view of a signer (the circle), and the signing space (the larger half circle). The X's represent locations (loci) which frequently represent entities in a discourse. While the options are theoretically limitless, the fewer loci there are in a discourse, the easier it is to distinguish entities. Therefore, it is common to have one locus on the left and another on the right rather than having multiple entities on one side. An entity can be set up in a locus with a point in its direction followed by the lexical item it represents. For example, in the 3 Little Pigs, the narrator sets up the wolf on stage right with a point, a couple variations of the sign wolf, and a point again as seen in figure (2). Then, throughout the rest of the story, a point to stage right signals the wolf.

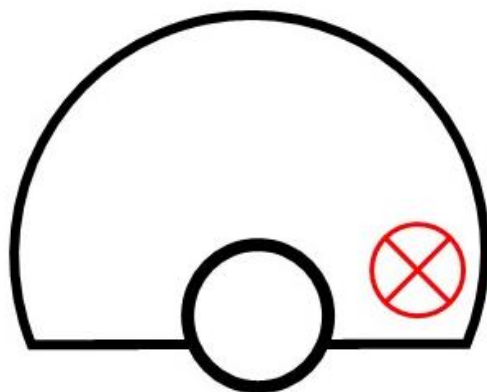


Figure 2 the locus designated for the wolf based on points and lexical items

But, as explained in Chapter 6, Ethiopian Sign Language uses loci in ways that are distinctly different from better-studied sign languages like American Sign Language¹ (ASL).

In this thesis, pointing towards a locus will be called a “point,” commonly also called an “index” in the literature. Points will be labeled in examples as IX₁ for first person pronouns and IX_{noun} for points towards a non-first-person locus as can be seen in example (1).

- (1) pause
- IX_{pigs} GO WORK; IX_{pigs} IX₁ WITH HOUSE NO (3LP 0:09)
- You (pigs) need to go work. You (pigs) can't live with me anymore.*

When the location of the loci is more relevant than the lexical item used to describe the entity, the annotation will read IX_{forward} or IX_{right}, etc. as in example (2).

¹ I have studied ASL for four years in an official setting and have been a user of the language since 1995. Additionally, I lived in an American Deaf house for nine months in 2017-2018 with total immersion into the language and culture.

(2)	HN	pause	
	<u>Eyebrow relaxed</u>	<u>Eyebrow raised</u>	
	IX _{right}	POSS ₁ WIFE	(BHS 0:07)
	<i>My wife</i>		

2.2. Role/body shift

In the linguistic literature, the phenomenon that happens when a signer takes on the persona of a participant has historically been called body shift or role shift (Lentz 1986). However, in recent years, linguists have started to describe what happens in role shift in terms of constructed action and constructed dialogue (Metzger 1995; Gray 2018). Role shift, aka constructed action, is when the actions of the signer iconically represent the actions of a participant in the story. Facial expressions, body movement, eye gaze etc. indicate the narrator has taken on aspects of the participant being discussed. In role shift, first person refers to the participant which has been shifted into, all referential loci are interpreted according to a shifted frame of reference centered on that participant, and zero references as subjects of clauses are generally understood as referring to that character.

Similar to constructed action is constructed dialogue, which is a way of describing what are commonly called quotations, but with the understanding that a quotation is often not an exact representation of what was actually said, but rather may incorporate other elements. So, constructed dialogue is when the signer reiterates the spoken or signed word of the character (Metzger 1995). However, for the purpose of this study the traditional term “role shift” for both constructed action and constructed dialogue is adequate.

Since the frame of reference changes when the narrator enters a role shift, when the narrator physically walks or signs WALK, it means that that participant is walking, not the narrator². If the narrator points to himself, he is indicating the participant, not the narrator, as in example (1) previous where the narrator, in the role of the mother, points to himself (IX₁) to indicate the mother of the 3 pigs.

Role shift, however, is not to be confused with body shift. Body shift is the actual movement of the body while role shift is a change in character which may also be indicated by facial expression, eye gaze, etc. That is, body shift is only one phonetic device that can be used to accomplish a role shift. Role shift and body shift often happen almost simultaneously. However, they do not have to happen at the same time; role shift can take place without a body shift at all. And vice versa, a body shift can be made towards a character's locus without immediately shifting into that character's role. This distinction becomes important while analyzing Ethiopian Sign Language, as discussed in section (4.7).

2.3. Narrator vs. character perspective

Throughout the narrative texts examined for this study, there are basically two types of perspective used. There is the perspective where the speaker is outside of the story, telling the events that took place as if he or she was a fly on the wall witnessing the whole thing, but not actually involved. Then there is the perspective where the speaker gets inside the mind of the characters and starts portraying their actions as if he or she were them or understood their feelings in the matter. The two perspectives differ in appearance and execution. For this corpus, the terms narrator perspective and character perspective have been borrowed from Janzen (2004)

² Though, if the narrator is not in a role shift of a character, he is assumed to be in the narrator role.

to explain which perspective is being used. Role shift and body shift are ways to help differentiate which perspective the speaker is currently using, but Janzen and Hendricks (2008: 163-201) agree that eye gaze is also a major component for distinguishing perspective. While the speaker is maintaining eye contact with the audience, he or she is also maintaining narrator perspective. But when the eye gaze leaves the audience to direct eye gaze towards the locus assigned to another character, it is likely the signer is in character perspective. When the narrator role shifts into a character, this is understood as character perspective.

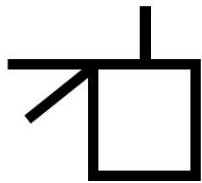
To distinguish the narrator of these texts from the narrator perspective and narrator role, the term “narrator” will be capitalized when referencing the role of Narrator, but the man actually signing the text will be known as a lower case narrator.

This distinction is important in later chapters, as the analysis becomes clear when narrator and character perspectives are taken into account.

2.4. Entity classifiers

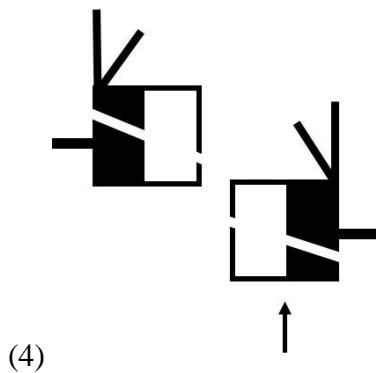
In most sign languages, entity classifiers are handshapes that enable a miniaturized representation of an event, with hands representing the entities involved in the situation. Historically they have been called by many different names, but this paper uses the term “entity classifier” as following Sandler and Lillo-Martin (2006), Engberg-Pedersen (1994), Schembri (2003), and Emmorey (2003). They can be used tell a story or situation from a manageable, small perspective without having to recreate everything with the full body or lexical items. The following examples show the potential benefits and ease of entity classifiers.

An American Sign Language (ASL) example of an entity classifier is the use of the 3 handshape to represent vehicles (3). This thesis makes use of SignWriting³ to explain the orientation, location, handshape, and movement of some examples. Since the narrator requested his face not be used in the thesis, SignWriting is a good alternative.



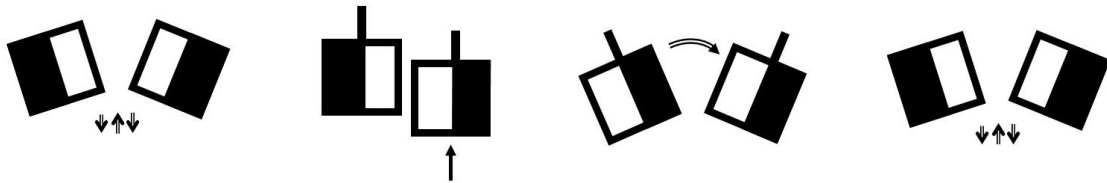
(3) *vehicle classifier handshape*

Using a single entity classifier construction, a.k.a. a miniaturized representation of the event with the hands representing cars, the idea of a car passing another car can be expressed concisely, as in example (4).



³ See Appendix for a deeper introduction to SignWriting as a writing system for signed languages.

However, the signer can tell the audience CAR PASSED OTHER CAR using only established lexical items (5).



(5) CAR PASS OTHER CAR

ASL speakers⁴ generally find the more compact classifier construction to be a clearer and preferred way to express this situation. While the lexical option is acceptable, entity classifier constructions are so ingrained in ASL, that not using them at times is peculiar.

Entity classifier constructions, along with size-and-shape specifiers and handling classifier constructions, have been claimed to be an “apparently universal... system that depicts the movement and location of objects in space” (Aronoff et al. 2003: 63). Aronoff et al go on to say (2003: 65):

There are several categories of forms, including (a) size-and-shape specifiers which depict shapes, outlines, and relative sizes of objects; semantic classifiers or (b) entity classifiers, which are less depictive and represent a broad class of noun objects; and (c) handling classifiers; which represent the human hand

⁴ As a way to minimize the separation between the Deaf and hearing, I use the same language one would use for a hearing person in regards to speaking, listening, saying, telling, etc.

manipulating an object. In all these forms, the hands are depictive of features of objects, either their physical features or more abstract semantic features.

While all three types of classifier constructions are an important part of language, this thesis is primarily concerned with entity classifiers (or rather the lack of them), because they are the ones primarily used for participant reference. Although Aronoff et al regard all three types as universal in sign languages, there are also claims that certain sign languages lack entity classifiers, for example Adamorobe Sign Language, used in Ghana (Nyst 2007). As is discussed in Chapter 7, Ethiopian Sign Language is another language that does not appear to have entity classifiers.

2.5. Handling classifiers

Handling classifiers are a type of classifier construction that uses handshapes that represent the way the hands would be held to manipulate objects. They reflect the real-life shape and sizes of entities. In this corpus of texts, a set of tires and a washing machine are both handled by the signer as if they were the actual size of the items (6).



(6) NTS handling classifier for moving tires (NTS 1:09)

When the narrator picks up a tire and sets it to the side (6), he uses a handling classifier to express the action, as if actually picking up the tire and moving it. Handling classifiers are relevant to this work because they provide one way to reference important entities in a story that are not animate and therefore cannot host a role shift.



METHODOLOGY

3.1. Text collection

The texts used in this study were collected from a deaf Ethiopian man, Fasil Kidane, hereafter known as the narrator. He became deaf at the age of five and attended Haesana School for the deaf in the south. Upon adulthood, the narrator moved to Addis Ababa where he lives currently. As mentioned in the Introduction (1.2), there are two dialects of Ethiopian Sign Language. The narrator, having lived in both regions of use, signs with a mixture of both. His job has him traveling in other countries and interacting with other sign languages, especially in Africa, and his wife is American so there is a mixture of sign languages used in the home.

The stories were collected at two different times⁵. Two of the stories, 3 Little Pigs and Pointy 3, were collected in 2015 in Grand Forks ND⁶, at a time when the narrator had just spent several previous years working in Kenya and interacting with Deaf from several African countries in a somewhat creolized variety of Kenyan Sign Language. However, his day to day work at that time was still among other deaf Ethiopians. Pointy 3 was collected after the narrator watched an American Sign Language (ASL) version of the story (Stone n.d.). He then retold the

⁵ The Institutional Review Board at the University of North Dakota exempted it from review.

⁶ This data was collected as part of SIL-UND's Field Methods course. Permission to use these stories was obtained from the narrator.

story in Ethiopian Sign Language. The Three Little Pigs was told from memory, but originally learned through ASL. During both filmings there were two hearing individuals in the room, one on either side of the camera. While it is understood that other native speakers in the room is a preferred way to gather data, under the circumstances, it was not possible. The filmings were done with no other Ethiopians around. However, the narrator was encouraged and trained to use natural language and ignore the fact that the listeners were not native speakers.

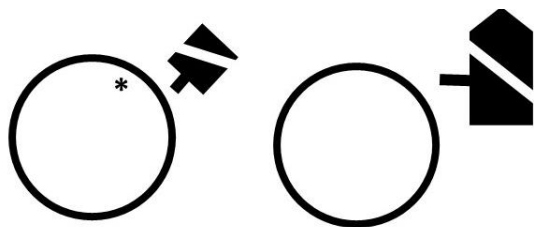
The other stories—Tortoise and the Hare, New Tire Story, Washing Machine Story, and The Birth of His Son—were collected in 2017 in his temporary home in Indiana, after he had spent two years back in Ethiopia and then six months in the United States with frequent exposure to ASL. A series of five stories was told with two cameras focused on the narrator including The Tortoise and the Hare and The Birth of His Son with the latter being the only usable story from this set. The narrator was requested to retell The Tortoise and the Hare. The narrator agreed and proceeded to tell The Tortoise and the Hare along with two new stories, The Washing Machine Story and the New Tires Story. At this point, there was enough data and the narrator was not requested to retell the other stories. This entire set of stories was told from memory with only one person in the room standing right behind the camera.

The data is represented in the following table (1) explaining the stories by order recorded, genre, location, and length.

Order recorded	Pointy 3	3 Little Pigs	Birth of His Son	The Tortoise and the Hare	The New Tire Story	The Washing Machine Story
Genre	Fiction	Fiction	Personal Factual	Fiction	Factual	Factual
Where recorded	North Dakota	North Dakota	Indiana	Indiana	Indiana	Indiana
Length	4:48	3:34	2:21	1:41	3:29	1:38
Example abbreviations	P3	3LP	BHS	TH	NT	WM

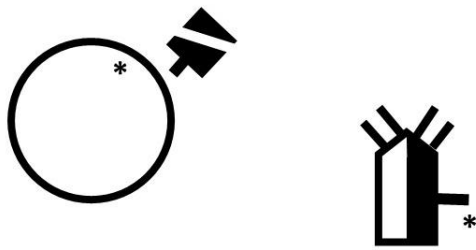
Table 1 stories by order recorded, genre, location, length, and abbreviations

In all the stories, his contact with other sign languages appears to have had some effect on his signing, particularly his vocabulary. There are some concepts he signs two different ways. HOTEL and DOCTOR are different in the two dialects in Ethiopia. He uses both variants of HOTEL in the Washing Machine Story and both variants of DOCTOR in The Birth of His Son. Further, the sign for MAN in Ethiopian Sign Language involves the signer touching the forehead followed by a flat hand palm down, as if showing the height of men (7).

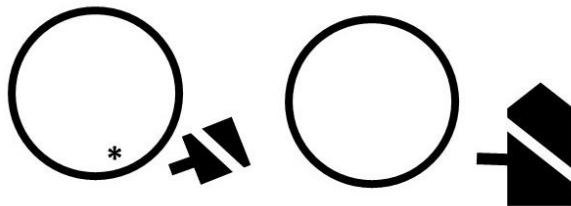


(7) MAN

However, in this data, the narrator borrows the ASL sign for MAN, which moves from the head to the chest, with a different handshape and orientation (WM 1:13) (8). This borrowing only happens for MAN; when he signs WOMAN in The Washing Machine Story (9) he uses the normal Ethiopian sign.



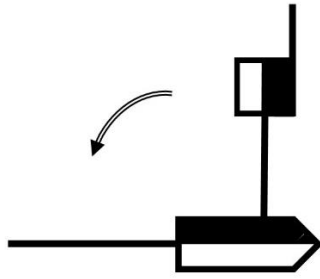
(8) MAN American Sign Language (WM 1:13)



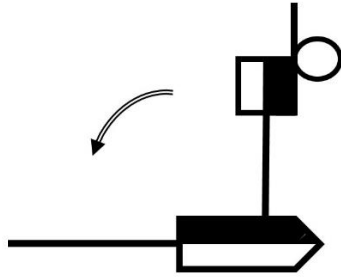
(9) WOMAN (WM 1:01)

As another example, he borrows from Kenyan Sign Language the first time he signs DAY (NTS 1:44). The next use, one phrase later, has the Ethiopian handshape, but the Kenyan movement (NTS 1:46). The third use is strictly the Ethiopian signs of DAY (NTS 2:05) as seen in example (10).

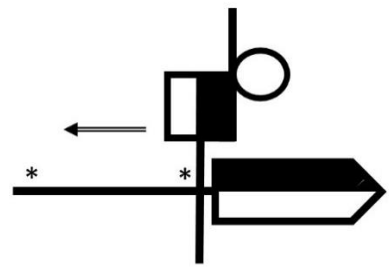
(10)



DAY (NTS 1:44)



DAY (NTS 1:46)



DAY (NTS 2:05)

This being said, his borrowing from other sign languages never interferes with what he is trying to convey since most are similar in form, and further, these lexical choices are independent of the participant referencing system discussed in this paper. Additionally, the sets of stories are told with a two-year gap where the narrator had exposure to other signed languages, but the same patterns appear in all the stories. (Because of this consistency, we can feel assured that his language in these texts is Ethiopian Sign Language.) The only case where borrowing impacts this study is in the Pointy 3 story where he borrows grammatical characteristics from ASL that Ethiopian Sign Language doesn't typically use. This borrowing and its effects are expanded on in Chapter 7.

3.2. Stories Described

This section summarizes the six stories and provides an overview of how they use the signing space. Stage positions are used in these story descriptions and continue throughout the thesis. The following Figure (3) shows where these are in relationship to the narrator.

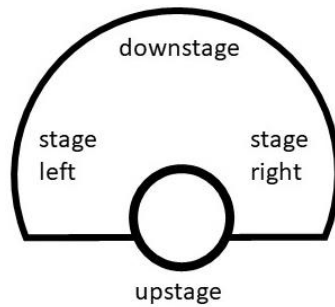


Figure 3 stage directions in relationship to the narrator (the circle)

3.2.1. The 3 Little Pigs

The Three Little Pigs is a common story in the United States of America but is told here with some unique innovations. Three pigs are told by their mother to go out into the world and make their own homes. They build their homes, one with straw, one with sticks, and the last with bricks. Then, a wolf enters the scene and proceeds to attack the pigs. He blows the first pig's house of straw away and eats the poor pig. He proceeds to the second pig's house of sticks and blows it away and eats the pig. But the wolf is still hungry so he moves on to the third pig's home. In this version of the story, he starts by calling out to the pig to get him to come out. When the pig shuts the window shutters in his face, he video calls the pig on his cellphone. But when the pig sees that it is the wolf, he hangs up in terror. The wolf then attempts to blow the house down but fails. Out of breath, he sees the chimney and proceeds to climb up it to reach the pig that way. The pig hears the commotion and starts to light a fire with a pot of water in the fireplace. However, he isn't fast enough and the wolf makes it down the chimney, grabs the pig, and gobbles him up. The moral of the story seems to be, if you try hard enough, you can get full.

In this story, all three pigs are set up on stage left. As each one dies, the next takes his place in this position. The story starts out with the mother on stage right, but when the pigs

move and build their own homes, the wolf takes over the stage right locus. What is interesting about the loci in this story is that the houses (and in turn the pigs) are set up downstage and when the story is strictly talking about the houses, then the points are toward downstage. However, when the pigs interact with the wolf, they are placed on stage left.

3.2.2. *Pointy 3*

Pointy 3 is a modern fable about Deaf experience, a story about a 4-pronged fork who lost a prong. Pointy 3, the main character, starts the story living in a town with other 4-pronged forks. However, these other 4-pronged forks only make fun of Pointy 3, they aren't his real friends. With a broken heart, Pointy 3 decides to move on and find new friends, ones that really love him. He starts his journey and soon runs into a spoon. As first Pointy 3 is interested in the spoon, but soon realizes they have nothing in common, so he keeps trekking. He then meets a terrifying steak knife. The knife has menacing features and towers over Pointy 3, frightening him. Needless to say, Pointy 3 moves on to find another friend. He then meets a pair of chopsticks who he really likes. But, the chopsticks tell him that they already have a best friend in each other and they don't need another friend. Sadly, Pointy 3 continues his journey and meets a butter knife. He thinks it might work out because they both are different from the typical knife and fork. After a brief time together, Pointy 3 realizes the butter knife is dull and moves on.

Then, Pointy 3 hears some laughter and tinging sounds! He goes to investigate and that's when a 3-pronged fork jumps up to meet Pointy 3. After recounting his story, Pointy 3 is informed that he isn't defective, but rather special. The 3-pronged fork explains how they are used for fancy food and Pointy 3 realizes his value. Pointy 3 is delighted he has found a new friend, but it turns out that the 3-pronged fork isn't alone but came from a town full of 3-pronged forks. Pointy 3 joins the party and lives happily ever after.

When this story starts out, the 4-pronged forks are set up on stage right and Pointy 3 is on stage left. But the narrator hasn't left narrator perspective before he changes his mind and swaps their placement. From this point on, Pointy 3 is on stage right when in character perspective. When in narrator perspective, Pointy 3 can be set in the middle of the stage, but only when another character is not on the scene. This means that all other characters are set up on stage left.

3.2.3. *Tortoise and the Hare*

The Ethiopian Sign Language version of the Tortoise and the Hare is very similar to Aesop's version. Since the signs for these words better fit the terms "turtle" and "rabbit," they will be used when discussing the characters in this story, but the title of the story will remain The Tortoise and the Hare.

There is a race between a rabbit and turtle. The rabbit is a proud fellow who believes he will win the race no problem. Half-way through the race he decides to take a nap – he is so far ahead, there is no way the turtle could catch him. But, as he sleeps, the turtle passes him by and almost reaches the finish line. When the rabbit wakes up, he looks behind him to see how much time he has, then suddenly realizes that the turtle is actually far in front of him. The rabbit jumps into action to try to win the race, but he is too late. The turtle, because he didn't stop, reaches the finish line before the rabbit and takes the title of victor away from the rabbit. The rabbit, embarrassed and humbled, turns and goes back home.

The turtle is set up on stage left in this story and the rabbit is stage right. What's interesting about this story is their loci aren't only distinct in left and right, but also upstage and downstage. At the start of the story and the start of the race, they are both upstage. But as soon as the monkey pulls the starting pistol, the rabbit moves downstage and stays there throughout

the rest of the story. The turtle stays upstage until the very end when he passes the rabbit and his locus moves slightly more downstage than the rabbit and wins the race.

3.2.4. *The New Tire Story*

The New Tire story is a true story told from a third person perspective. One of the narrator's deaf friends works in a hospital as the maintenance man. One day, the hearing bus driver comes to the deaf man and asks him to get new tires for the bus he drives. The deaf man agrees to get more and the two men go into town to get new tires. But then, the hearing man decides he wants to profit from this interaction. He secretly takes the tires off and replaces the inner tubes with old ones and sells the new ones. He then goes to the deaf man and complains that the tires are no good and they need new ones. But the deaf man is wise and smells something fishy. The hearing man wishes to go into town alone to get new tires, but the deaf man insists he goes along. When they get to the tire shop and the new tires are taken off of the bus, the deaf man sees the old inner tubes, realizes what the hearing man has done and reports him to the mean boss at the hospital. After being scolded, the hearing man approaches the deaf man and apologizes for his dishonesty and praises the deaf man for being wise and smart.

This story starts with the deaf man on stage right. But then the hearing man is introduced and also set up on stage right. And then the tires are introduced and set up on stage right. This story starts to show why it is important for the sign to accompany a point in a story because all three characters are set up in the same locus. However, when the hearing man first talks to the deaf man, the hearing man is on stage right, so the deaf man gets moved to stage left without calling attention to the change of locus. The two characters remain in those locations for the remainder of the story as long as they are on stage together. However, when the deaf man goes and talks to the boss, he moves to stage right and the boss takes stage left.

3.2.5. *Washing Machine Story*

The Washing Machine Story is a true story that happened to another deaf friend of the narrator, also told in third person. This story takes place in a hotel where the deaf man worked. One day, the deaf man notices that the washing machine in the hotel shakes like crazy while it is running. The hearing people that work there run to the machine and try to hold it still while it runs because of the fierceness of the shake. Other people have tried to fix it in the past, but to no avail. The deaf man watches the scene for a bit and then decides that he could fix the machine. The deaf man waits for the room where the machine is kept to be empty and he starts to work on it. After a while, he successfully fixes the machine so there is no more horrible shake, but it runs smoothly.

The hearing white woman that works at the hotel goes to use the machine and is shocked at how smoothly it runs. She is so happy that she seeks out the expert who fixed the machine. Discovering that it was the deaf man, she shakes his hand and applauds him on his success and thanks him. She tells him how deaf and hearing people are equal and how she now realizes deaf can do anything that hearing can do.

The washing machine is set up on stage left and all other characters come in on stage right to interact with the washing machine. For the first part of the story, it is only the washing machine and another character on stage, but when the white woman interacts with the deaf man, the woman takes stage left and the deaf man remains on stage right.

3.2.6. *The Birth of His Son*

The Birth of His Son is a true personal story about the narrator's family. Unlike the New Tire Story and the Washing Machine Story, this story is told in first person, resulting in a somewhat different discourse structure from the other stories.

The story tells about how his son was born early because of “hard-to-explain” pregnancy problems. The narrator, his wife, and the doctor all agreed that the baby needed to come early for the health of everyone. So, at 37 weeks, the baby was born via C-section. The doctor asked the narrator if he wanted to watch, and the narrator kindly declined because he would get dizzy and pass out. But the birth was successful and everyone was healthy. Now the narrator’s son is one month and one week old and doing well. The story ends giving thanks to God for the health of his son.

While every other story has major loci changes where the narrator crosses the signing space, i.e. moving from stage right to stage left or vice versa, to talk about different characters, the narrator stays in the same place while telling this story. Pointing at loci still happens, but he does not follow it with a move to their location, i.e. body shift. This is one case where the loci are used somewhat randomly. This is discussed in section 6.1. But, it means that noticing role shift in this story strongly depends on the entity signs and facial expression.

3.2.7. *Types of stories*

These six stories can be divided into different categories for discussion. The Tortoise and the Hare, Pointy 3, and The Three Little Pigs are all folklore or fables. They differ from the other three stories, The Washing Machine, the New Tires Story, and the Birth of His Son, which are all true stories.

However, The Birth of His Son is told from a 1st person perspective, while the remaining five stories are told from 3rd person perspective. This story’s pattern of referential markings are strikingly different from the other stories, which may be due to it being told in 1st person.

These similarities and differences become important when analyzing behavior of the narrator in coming chapters and are listed in the following table (2).

Title	true or fable	person
The Birth of His Son	Personal true	1 st person
New Tire Story	True	3 rd person
Washing Machine Story	True	3 rd person
Tortoise and the Hare	Fable	3 rd person
Pointy 3	Fable	3 rd person
3 Little Pigs	Fable	3 rd person

Table 2 categorizations of stories

All three of the fables have ASL versions available for comparison. The narrator watched the ASL version of Pointy 3 immediately before recounting this story and so some ASL aspects appear in this data where they normally wouldn't if it was told strictly from an Ethiopian perspective. The ASL version of the Tortoise and the Hare was never viewed by the narrator and is only used as a comparison story for the researcher.

3.3. Analysis methodology

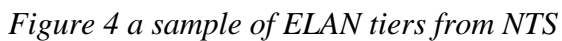
These stories were annotated using ELAN, with separate tiers indicating glosses, body shift, pointing, and eye gaze. The gloss tier was labeled based on the English meaning for each sign. Along with this tier, an entity tier was added to identify all entities. These annotations were labeled in reference to the gloss tier, simply adding an annotation when an entity was mentioned. For the next tier, body shift was marked rather than role shift, for reasons discussed in section 4.7. Body shift was labeled with terms such as “to wolf” or “to deaf” depending on which locus the narrator was moving toward. The pointing tier was labeled with the entity to

which a point was referring. For example, the annotations in this tier were labeled “rabbit” or “turtle” rather than “left” or “right.” For this research, the direction of the point was less important than indicating who was being referenced. Eye gaze was sometimes used as a reference to a participant, in which case words such as “as rabbit” or “at rabbit” were used as labels. “As rabbit” is an indicator of role shift or character perspective. When in this role shift, all the different eye gaze locations were not annotated, so the whole role shift has “as rabbit” never “as rabbit to turtle.” Furthermore, direction words such as “up,” “left”, and “distant right” were used for eye gaze not directed at a specific entity. Eye contact with the camera or audience was also important and was marked by leaving the space in the tier blank.

Ethiopian Sign Language seems to use trills and repeats frequently, so separate tiers were added to mark these constructions to see if their use here was relevant to references. If a word in the gloss tier was trilled or repeated, an annotation was added to the corresponding tier. They were not, however, further labeled.

In order to make sense of the previously mentioned tiers, a tier named perspective was added. This tier was labeled with annotations labeled narrator or character. As mentioned in section 2.3, perspective of the narrator helps explain the differences in referral types. This tier correlated heavily with the eye gaze tier.

Figure 4 shows a screenshot of the system used to analyze the texts in ELAN.



TYPES OF REFERRING EXPRESSIONS

Ethiopian Sign Language refers to entities in a text with lexical nouns and noun phrases, points, eye gaze, agreement/zero reference, and body/role shift. While each of these devices can be used alone, they are often used in combination. Their use individually and together is discussed in this chapter.

4.1. Lexical nouns and noun phrases

The most common type of referring expression in Ethiopian Sign Language consists of lexical nouns and noun phrases. The following examples (11-13) are taken from the corpus to show different types of NPs found in the text, ranging in levels of complexity.

- (11) [RABBIT] CRY (TH 1:30)
The [rabbit] cried.

- (12) [IX_{deaf} MAN DEAF] ANGRY (NTS 2:48)
The Deaf man was angry.

- (13) [IX_{hearing} MAN HEARING IX_{hearing} DRIVE BUS] LIE (NTS 3:00)
... [the hearing man who drives the bus?] He lied.

These examples (11-13) range from a single lexical item in the NP (11), to a complex NP with a point, single noun, and adjective (12), to a complex NP with a point, single noun, adjective, and a relative clause (13).

4.2. NPs in Ethiopian Sign Language

In order to adequately analyze the more complex and longer NP clusters, it is important to know the basic structure of an Ethiopian Sign Language NP. As in other languages, noun phrases (NPs) in Ethiopian Sign Language can be a single noun, as seen in example (14) in brackets.

- (14) trill

GO TOWN [TIRE] WORK (NTS 1:05)
They went to town. The [tires] were worked on.

When numerals are added to the NP, they occur before the noun (15).

- (15) 3 PIG (3LP 0:08)
3 pigs

Possessive pronouns also come before the noun (16).

- (16) POSS₁ FRIEND (NTS 0:04)
my friend

This corpus does not have any examples to show if possessors come before or after numerals, but when asked, the narrator explained that possessive pronouns occur before numerals.

- (17) POSS₁ THREE FRIEND
my 3 friends

Adjectives and points can come before or after the noun (18 – 22) and in any order.

(18) IX_{deaf} MAN DEAF (WM 0:05)

Pt N Adj

the deaf man

(19) HEARING IX_{man} SERVER (WM 0:23)

Adj Pt N

the hearing server

(20) WHITE WOMAN IX_{woman} (WM 1:01)

Adj N Pt

the white woman

(21) IX_{hearing} HEARING DRIVER (NTS 0:30)

Pt Adj N

the hearing driver

(22) IX_{left} 3-PRONGS MANY (P3 4:15)

Pt N Adj

the many 3-pronged forks

Relative clauses (23) and prepositional phrases (24) (in brackets) come after the noun.

(23) IX_{hearing} MAN HEARING IX_{hearing} [DRIVE BUS] LIE (NTS 3:00)

...the hearing man [who drives the bus]? He lied!

(24) IX_{hearing} FS_{service} SERVICE [IN TRAVEL WORK] (NTS 0:32)

He does service [including traveling work].

Given these facts, a general schema for NPs in Ethiopian Sign Language can be stated as in (25).

$$(25) \quad (\text{Poss}) \quad (\text{Numeral}) \quad \left(\left\{ \begin{array}{c} \text{IX} \\ \text{AdjP} \end{array} \right\} \right) \text{N} \left(\left\{ \begin{array}{c} \text{IX} \\ \text{AdjP} \end{array} \right\} \right) \left(\left\{ \begin{array}{c} \text{RelCl} \\ \text{PP} \end{array} \right\} \right)$$

A noun phrase is normally a single intonation phrase. If the eyebrows are raised, they are raised throughout the whole phrase and there is no pause or head nod between words.

Sometimes, however, two noun phrases, referring to the same entity, are juxtaposed with an intonation break, i.e., eyebrow differences, head nod, or a pause. That is, the second NP is appositive to the first, providing a second referring expression that references the same entity.

$$(26) \quad \begin{array}{ccc} & \text{HN} & \text{pause} \\ \hline \text{Eyebrow relaxed} & & \text{Eyebrow raised} \\ \text{IX}_{\text{right}} & & \text{POSS}_1 \quad \text{WIFE} \quad (\text{BHS 0:07}) \\ \text{here, my wife} & & \end{array}$$

In this case, based on the schema for basic NPs (25), there are two different phrases, because the presence of the possessor unambiguously indicates the start of a new noun phrase (26).

Recognizing these intonational differences is important for understanding seemingly long NP structures. Based on the eyebrow movements, they can be broken up into smaller NPs that fit the previously mentioned rules (27).

$$(27) \quad \begin{array}{ccc} \text{eyebrows up} & & \text{eyebrows down} \\ \hline \text{ONE} \quad \text{MAN} \quad \text{BUS} & & \text{IX}_{\text{hearing}} \quad \text{HEARING} \quad \text{DRIVE} \quad (\text{NTS 0:28}) \\ \text{One man with the bus, the hearing driver...} & & \end{array}$$

In general, then, in this corpus, I have relied on prosodic factors (eyebrow position, head nods, pauses) as well as the schema (25), to identify the boundaries of the NPs in such long strings. As will be seen, these elaborate strings have special discourse significance in most stories in the corpus.

4.3. Heavy nouns and noun phrases

The term “heavy” in this thesis refers to what happens when an expression is made longer for various purposes. An expression can be made heavy by repetition or holds of nouns and adjectives. Heavy nouns, repeated noun phrases (NPs), and strings of NPs, as described in the next few subsections, are all ways of lengthening a NP⁷. As will be seen in sections 5.1 and 5.4, repeated NPs, heavy nouns, and other forms of lengthening are important because they occur in specific positions within the structure of a story.

4.3.1. Repetition

Repetition in language can be used for multiple reasons, but of interest to this study is its use in participant referencing, and, therefore, typically with nouns and noun phrases. There are three forms of repetition that the narrator uses in the texts: repeats, trills, and holds. These vary in form but are used interchangeably.

4.3.1.1. Repeats

The most obvious form of repeating is when an entire noun phrase is repeated, as in (28).

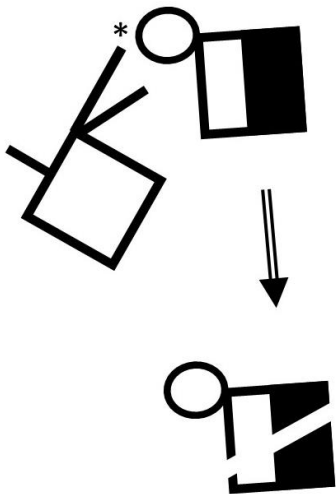
⁷ The uses of lengthening, including introductions and self-correction, are discussed in section 5.4

(28) HOUSE RED STONE RED STONE (3LP 0:49)

A house made of red brick

Example (28) is taken from the 3 Little Pigs (0:49) and has the phrase RED STONE repeated. This highlights its importance since the brick construction of the house is what increases the difficulty for the wolf.

While noun phrases are the most obvious form of repeats, repeated single nouns are the most common. A full repeated noun is a single sign signed two or more times with a pause between each instance of the sign. For example, the narrator in the 3 Little Pigs assigns STICKS (3LP 0:44) to the 2nd pig. The sign for stick is an ‘baby O’ handshape on the dominant hand and 3⁸ handshape on the non-dominant. The ‘baby O’ handshape starts at the thumb of the non-dominant and moves closer to the floor, as if a stick is falling off a tree (29).

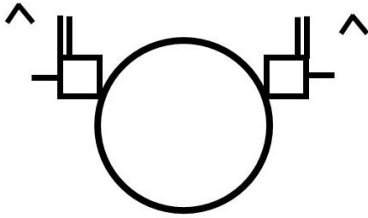


(29) STICK (3LP 0:44)

⁸ Typically a 5 handshape, but adapted to hold the buoy of “3” from the 3 pigs he is referencing. (A buoy consists of the non-dominant handshape of a sign, held in place to represent that sign as a type of pronoun, while the dominant hand continues with other signs.)

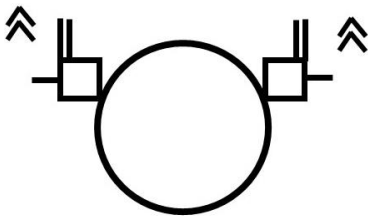
When he repeats this sign, the ‘baby O’ handshape moves towards the floor, there is a pause, and then it moves back up to the thumb and down again. All single noun repeats in this corpus follow this pattern of having a pause after each instance.

Reduced repeats are also used in this corpus: the sign is fully repeated, but there is no pause between instances. For example, RABBIT is normally signed by putting the three handshape, pinky side of the hand, on both sides of the head, and flexing the fingers only once.



(30) *simple noun RABBIT*

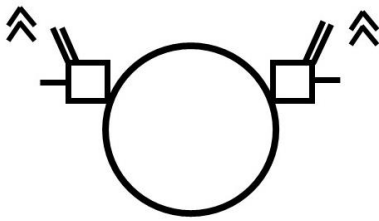
In the Tortoise and the Hare (0:39), RABBIT is signed twice with the fingers brought straight up again for the second iteration, but, there is no pause between the uses (31).



(31) *heavy (repeated) noun RABBIT (TH 0:39)*

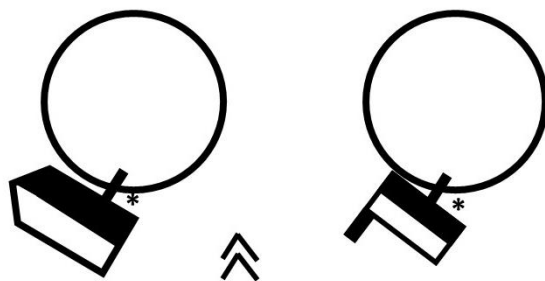
4.3.1.2. Trills

Trills are a rapid-fire type of repeat. Like repeats, trills involve multiple utterances of a word. However, trills have a shortened movement. For example, when RABBIT from Tortoise and the Hare is repeated, as described in the previous section, it is with a full extension of the fingers (TH 0:10), but RABBIT is also trilled with the fingers only raising partially before they are flexed again (TH 1:06). This trill is another way to make a simple noun heavy (32).



(32) *heavy (trilled) noun RABBIT (TH 1:06)*

Some signs have trills built into them as a part of the sign; this can be called inherent trilling. This type of trilling is done when the movement is a continual back and forth, or up and down, or side to side, or diagonal to diagonal, or staggered, etc. movement. Therefore, signs can be trilled at the fingers, wrist, elbow and even the shoulders, though trills involving larger body parts are less common. This type of trilling is not considered heavy since it is inherent to the sign itself. For example, the sign MOTHER in Ethiopian Sign Language (3LP 0:04) has a trill with the fingers bending as the thumb rests on the chin (33).



(33) MOTHER (3LP :04)

To make signs with inherent trills heavy, the speaker lengthens them by continuing them for longer than normal. In the previous example (33), this sign is inherently trilled, but the amount of time it trills is variable. When this time is extended, it is meaningful in the same way as repeats or trills of signs not normally trilled. For example, the first use of MOTHER (3LP 0:04) lasts 1.36 seconds, but the very next time it is trilled (3LP 0:05), it only lasts 0.8 seconds; the lengthening of the first use is therefore considered significant as being heavy.

4.3.1.3. Holds

American Sign Language (ASL) generally requires all signs to have a movement, so many signs become trilled to meet this requirement. However, in Ethiopian Sign Language adding a trill to a still sign isn't necessary, but the amount of time it is still (frozen) can lengthen so that the sign becomes heavy. For example, one reference to the 4-PRONG.FORK is held for 2.16 seconds (P3 0:13). The narrator holds up the sign for this entity and looks at the audience and just before the end of the hold, there is a head nod. However, later in the story, this same sign only lasts 0.49 seconds (P3 0:32).

4.3.2. *String of NPs*

Noun Phrases (NPs) can be repeated for lengthening as mentioned in section 4.3, but they are also lengthened by stringing multiple coreferential NPs together (34) (see also section 5.4.1).

- (34)

eyebrows up		eyebrows down
ONE MAN BUS		IX _{hearing} HEARING DRIVE (NTS 0:28)

One man with the bus, he's the hearing driver...

4.4. Points

Points are often used as pronouns in sign languages, taking the place of the sign representing an entity. An example of this is shown in example (35) from the 3 Little Pigs, where the mother pig is talking to the 3 little pigs. Points are indicated with IX_p – where IX stands for the point itself and the subscript _p changes to indicate the location or referent that the location represents. Thus, IX_{pigs} shows the point is towards the locus for the pigs, while IX₁ has the point towards the chest of the narrator, representing first person (the mother pig).

- (35)

IX _{pigs} GO WORK;		IX _{pigs} IX ₁ WITH HOUSE NO (3LP 0:09)
-----------------------------	--	---

You (pigs) need to go work. You can't live with me anymore.

Points can also be used as determiners in NPs. As shown in Section 4.2, points can come before or after nouns, which typically indicate what part of signing space is being used to represent the entity. Note example (36) from the 3 Little Pigs and example (37) from the New Tire Story, where the points are not individual NPs, but they combine with the lexical items to show a distinct pig and hearing man.

- (36) IX_{left} PIG (3LP 1:24)
The pig
- (37) IX_{right} MAN HEARING (NTS 2:18)
The hearing man

4.5. Eye gaze

The typical use of eye gaze in signed languages as a referring type is like the typical use of a point. Instead of the index finger indicating the space set up for an entity, the narrator will look to the locus of the entity. Throughout a text, the narrator tends to look at the audience most of the time, keeping eye contact with them. Therefore, when the narrator looks in a different direction, it is generally for some special purpose, such as looking at the locus of entities to which he is referring. Often, this happens simultaneously with a point (38). When it doesn't happen to match the point, it matches the body shift. Eye gaze, in this corpus, doesn't occur as a sole referring expression, it is always paired with another kind: point, body shift, etc.

- (38) **Eyegaze_{rabbit}** **BS_{rabbit}**
 trill
IX_{rabbit} RABBIT (TH 1:29)
The rabbit...

4.6. Agreement/zero reference

Often, in Ethiopian Sign Language, as well as other signed languages, a character may be indicated in a story without any overt reference at all, or with reference only by means of agreement. Once entities are established in loci through pointing, body shifting and eye gaze, spatial agreement starts to occur in various forms. Some transitive and ditransitive verbs can

have spatial references included in their morphology to show subject, object, and indirect object agreement (Padden 1990, Sandler and Lillo-Martin 2006). This type of verb is commonly called an agreement verb⁹. For example, the verb GIVE incorporates referents in its motion path by clearly showing who started with the item and who ended up with it. But in all cases of agreement, the argument needs to be represented by a locus at one end of the verb's movement path.

Other verbs do not inflect to agree with their arguments, and therefore do not signal the specific entity in their form; these are known as plain verbs. When this occurs and there is no explicit entity mentioned elsewhere in the clause (by a NP, point, etc.), it is called zero reference. Furthermore, multiple plain verbs can occur in a row without any explicit reference to the entity doing those things. After the subject is explicitly mentioned with the first verb, the remaining verbs have a zero reference to the same entity as the first verb. This can be illustrated with the following example (39) from the Tortoise and the Hare.

(39) RABBIT RUN LOOK.BACK LAUGH (TH 0:39)

The rabbit started running, then he looked back and started laughing

In example (39), it is clearly the rabbit doing all three actions, even though he is only mentioned once. Clearly, RUN has RABBIT as its subject, since it immediately follows an explicit noun. The RABBIT is understood as the subject of the other two verbs because the verbs with zero

⁹ Although there is some controversy as to whether these verbs actually show agreement in the same sense as agreement in spoken languages, that issue is not important for this thesis and I will continue to refer to them as agreement verbs.

references, LOOK.BACK and LAUGH, are understood to have the most recently mentioned referent as their subject.

4.7. Body/role shift

Like pointing and eye gaze, body shift relates to loci in the signing space the narrator uses to tell a story. As noted in section 2.2, body shift, an aspect of form, needs to be distinguished from role shift, an aspect of meaning. Although body shift is one means by which role shift is accomplished, role shift can take place without body shift (through a change in facial expression, for example), and body shift is used in Ethiopian Sign Language sometimes without role shift.

As mentioned before, the narrator sets up spaces that represent certain entities. Such a space can be referred to with a point, eye gaze, or agreement, but when one participant becomes the primary agent for one or more clauses, body shift provides a more obvious way of highlighting the significance of that character. Body shift involves the narrator actually moving his body into that part of signing space that represents an entity. Unlike in many other sign languages, in Ethiopian Sign Language this is not simply a turn of the head or shoulders but usually by standing in a different location. Example (40) represents this idea. Body Shift is indicated by “BS” with the underline indicating the length of time in this position. “RS” stands for role shift. Note that the body shift to the locus for the pig occurs before the narrator takes on the pig’s facial expression or starts talking or acting as the pig.

(40)	<u>BS</u>			
	<u>RS</u>			
	IX _{pig}	PIG	WHAT	WALK (3LP 2:30)
<i>The pig thought, “what?” and started walking.</i>				

Although often body shift is used to bring about a role shift, sometimes body shift happens without immediate role shift. In example (41) from the New Tire Story, at 1:56 the narrator moves his body into the locus for the deaf man but continues to talk about him in third person and doesn’t “take on” his persona as first person until the non-manual marker ‘scowl’ occurs at 2:02.

(41)	<u>BS</u>						
	<u>RS</u>						
	IX _{deaf}	MAN	DEAF	VERY	WISE	SMART	WISE THUMBS UP <u>NM -scowl</u> (NTS 1:56)
<i>The deaf man is very wise and smart, very good. He thinks, “Uh?”</i>							

Conversely, role shift does not require a full body shift, but rather can be accomplished by a change in expression, posture, etc. to show the narrator’s change into another role. Example (42) shows the narrator’s body shifts into the locus of the deaf man from the New Tire Story, but the narrator role shifts into the hearing man (with a point in the hearing man’s direction, eye gaze towards the ceiling, and a teeth clench noted in example (42) as NM-regret) for a moment before he enters narrator perspective to tell that the two left together (GO.WITH).

(42)	<u>BS_{deaf}</u>		
		NM-regret	EyeGaze _{audience}
		<u>RS_{hearing}</u>	<u>RS_{narrator}</u>
	IX _{hearing}	GO.WITH	(NTS 2:27)
	<i>The hearing man didn't want to, but he went with him.</i>		

Another consequence of a role shift is that it affects the interpretation of zero reference. Not only is an entity brought into focus when a signer takes on its persona, but instances of subject zero reference are interpreted relative to the frame of reference for that character. If the role shift involves constructed dialogue, the character is understood as the speaker/signer of that communication. In the 3 Little Pigs, the wolf and pig have a brief dialogue back and forth. The wolf tells the pig to “come here” and the pig responds with “no, no.”; the change of speaker is indicated by a point, body shift, lexical item, and role shift. Further, COME.HERE, spoken by the wolf, is a directional verb moving toward the wolf, therefore this command’s subject is understood according to the wolf’s frame of reference to be the pig. Similarly, “no, no”, said by the pig, is said toward the space that represents the wolf, but without an explicit reference to the wolf. In these cases, I have analyzed these as instances of zero reference within a role shift.

Therefore, this paper does not recognize role shift as a referring expression in and of itself. Body shift is the referring expression while role shift is a means of changing the context within which other referring expressions are interpreted. Even in example (42) where the narrator is in the body shift of the deaf man but enters a role shift of the hearing man, he first points to the hearing man and that is the referring expression, not the role shift. Further, in example (41), the narrator does not need another referring expression right before that role shift; the body shift, point, and lexical item at the beginning of the example is used as the referring

expression so that when the narrator enters the role shift, the context has been changed, but not the character. The role shift is simply a way to show that the perspective and context of the story is about to change and the point of view is now from the eyes of the character previously referred to.

DISTRIBUTION OF REFERRING TYPES

5.1. Three positions of referring expressions

The types of referring expressions described in the previous chapter are distributed throughout a discourse in regular patterns, in three types of positions which I call introduction, reintroduction, and other.

These positions are best understood with storyline charts representing the overall sectional structure of a text. Figure 5 shows a basic storyline chart.

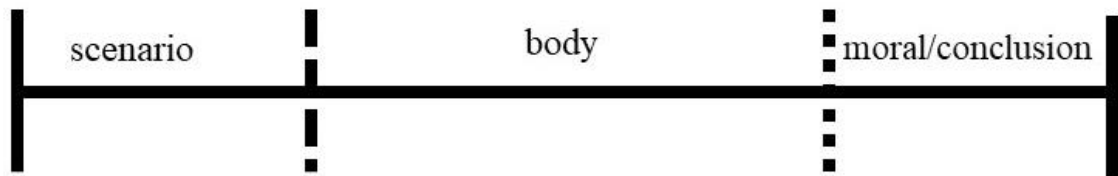


Figure 5 a typical narrative layout with three parts; scenario, body, and conclusion

Figure 4 has the three main sections of a story: scenario¹⁰, body, and conclusion, with the long-dashed line signaling the switch to the body of the text and the short-dashed line signaling the switch to the conclusion.

¹⁰ Often called “introduction,” but with entities having regular introductions, it is clearer to give this section of the story a different title.

In the scenario section, the narrator sets up the story and gives details of important points and characters the audience needs to know about. The setup of a story varies from story to story, potentially telling time, place, type of place, or the background of the characters and how they met, etc. But the important part for reference tracking is noting that the main characters are introduced in this scenario section. There is no real role shifting; the narrator is generally in an omniscient narrator role. In other words, it is the beginning portion of a story when the narrator is in narrator perspective.

There is one apparent exception to this in the corpus: The 3 Little Pigs has an interesting scenario where the narrator role shifts into character perspective for MOTHER, but this isn't found in other texts. In this portion of the story, the narrator is still narrating, but using the MOTHER to explain the details. The difference is apparent from the rapid head movement between facing the audience and facing the 3 pigs. This is unlike normal character perspective where the narrator ignores the audience to focus on the character's actions. In other words, it does not have the same form as a role shift that occurs in the body of a text.

The body of the text starts when the narrator first body shifts into the locus for an entity and soon after enters character perspective. The body of a text may continue until the end of the story without a conclusion or moral. However, a conclusion or moral are identified by a rapid shift in eye gaze between the audience and some locus for a character in the story. For instance, the narrator is role shifted as the white woman at the end of the Washing Machine Story. When the moral starts, the narrator keeps his body facing towards the deaf man as it was before, but his eye gaze switches from the audience to the deaf man several times (WM 1:23). This is similar to the scenario of the Three Little Pigs where the role shift as the mother is not the standard role shift, but there is a rapid eye gaze change between the three pigs and the audience. So, this rapid

change in eye gaze in a role shift is an indicator that a) this isn't a typical role shift but involves the audience in a special way, and b) it isn't the body of the story.

Within this structure, I use three symbols to represent the distribution of referring expressions, specifically the three functions that a referring expression can serve within a story, as seen in Figure 6.



Figure 6 three functions of referring expressions

These three functions are explained in the next three subsections.

5.1.1. Introductions

“Introductions” in this thesis refer to a referring expression that is the first mention of an entity. Understandably, the introduction of an important entity typically happens in the scenario portion of a story. Figure 7 illustrates this for the Tortoise and the Hare story. Figure 7 and example (43) show the introductions of the turtle and the rabbit in the Tortoise and the Hare story.

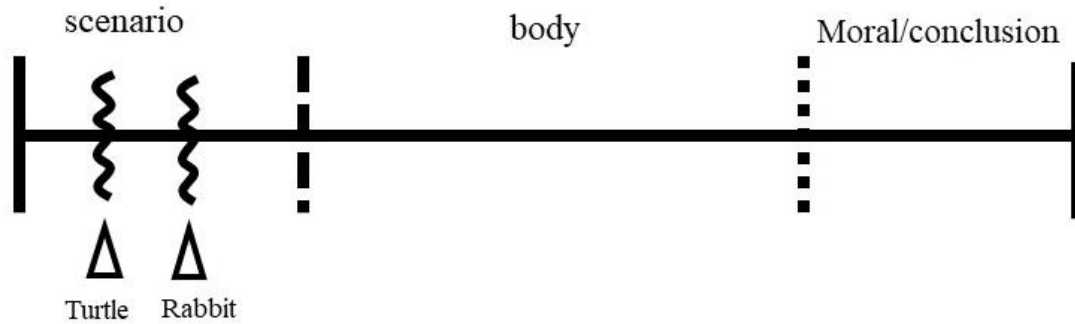


Figure 7 the introductions (squiggles) of the rabbit and turtle in TH

(43) BS_{turtle} BS_{rabbit}
Repeat Repeat
TURTLE AND RABBIT TWO LINED.UP CROUCHED.DOWN RUN FAST (TH :08)
There was a turtle and rabbit lined up and ready to race.

However, not all entities are introduced in the scenario, some may be introduced in the body of the text as seen in Figure 8.

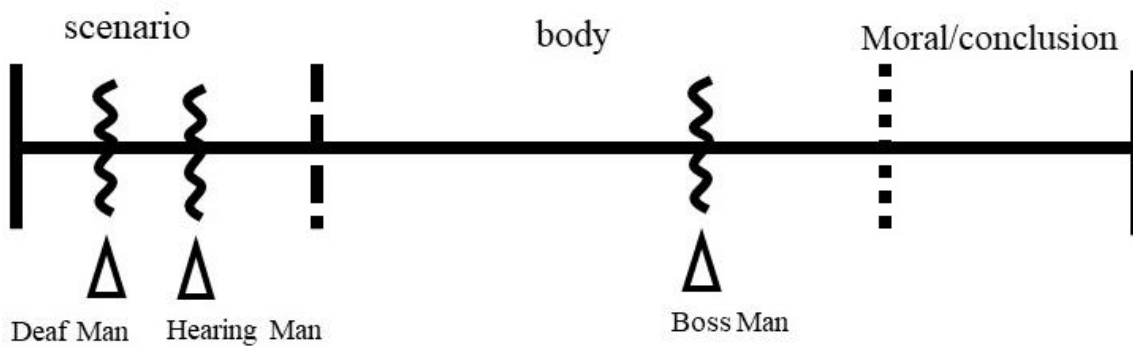


Figure 8 introductions (squiggles) of the deaf man, hearing man, and boss man in NTS

Figure 8 shows the two main characters are set up in the scenario of the story, but their boss, a minor character, isn't introduced until late in the story. All three of these are referred to as introductions in the corpus, even though only two of them are done in the scenario.

The two previous Figures (7-8) bring up two points about introductions that are addressed further in section 5.3 to come. Example (43) has the use of an additional NP, TWO, which gives greater emphasis to the fact that these are the two main characters. Second, Figure 7 has a character introduced in the body of the text. This typically happens because he is not a main character, but a minor one. Again, these situations are further looked at in section 5.3.

5.1.2. *Reintroductions*

Once an entity has been introduced, it can be referenced again throughout the remainder of the story. What's distinctive about what I'm calling reintroduction happens as the narrator changes the entity to which he is referring in order for a different entity to become the subject of the next few clauses. As Figure 9 shows, these reintroductions happen in the body of the story when the narrator shifts from one role to another.

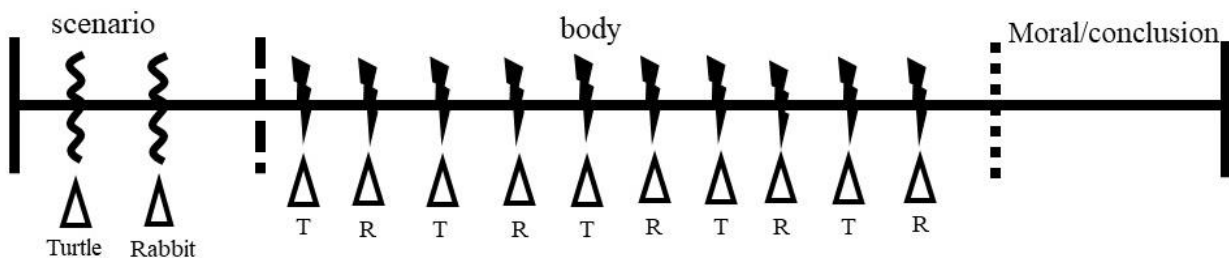


Figure 9 reintroductions (lightning) for the turtle and rabbit in TH

These reintroductions, as done by the narrator in this corpus, are typically a pattern of a point to a locus that represents the reintroduced character, body shift to that locus, brief eye gaze

towards the locus¹¹, lexical item(s) that identity the referent—these can occur in any order or even sometimes simultaneously, but most often the lexical item is last—and finally a role shift into that character¹². The Tortoise and the Hare is a clear example of clean shifts between characters. When the narrator finishes a section of the story in the role of the rabbit, from the rabbit’s perspective, he shifts into the role of the turtle with a reintroduction and continues presenting the story from the turtle’s perspective. Example (44) shows what occurs in one such instance. The usual annotation of “WORD++” for a repeated word is not used here, but instead the word “repeat” above the gloss to distinguish between holds, trills, and repeats.

(44)	<u>RS_{rabbit}</u>				<u>RS_{turtle}</u>				
					<u>BS_{turtle}</u>				
	Eyegaze – as rabbit				EG-down	<u>EG-as narrator</u>			EG-as turtle
					repeat				
	SLEEP	SNORE	DIE	IX _{turtle}	TURTLE	PATIENT	SLOW	WALK	(TH 0:50)
	<i>The rabbit was sleeping and snoring as if he were dead. The turtle was patient and slowly walking...</i>								

However, the Washing Machine Story and The New Tire Story have recurring entities that are not animate, which are not eligible for role shift. If the narrator uses them as the subject of clauses, he still follows his pattern of point, body shift, lexical item(s), but instead of role shifting into the tire or washing machine, he will role shift into the role of the Narrator¹³ based on the eye gaze towards the audience as can be seen in example (45).

¹¹ If the point does not match with the body shift, then the eye gaze follows the body shift rather than the point. Potentially because the narrator takes steps across the stage to body shift and not just a rotation at the waist.

¹² Though role shift can happen seconds later and doesn’t necessarily happen immediately.

¹³ This use of “narrator” is capitalized for it does not refer to Fasil as Fasil, but as the character role of narrator.

(45) BS_{narrator}
 RS_{narrator}
 EyeGaze_{audience}
 IX_{machine} MACHINE CLOTHES WASH CLOTHES IN (WM 0:17)
 The washing machine had clothes in it.

Figure 10 brings to light a different aspect of reintroductions that the Tortoise and the Hare didn't address. Since the function of introduction and reintroduction are different, an entity can be introduced and then immediately reintroduced. In this sequence, when MOTHER is introduced, it is trilled for 1.36 seconds (3LP 0:04). Then, as the sign comes to an end, there is a head nod. There is a slight pause in the trill and the hand comes off of the chin as the narrator steps to stage right (body shifts) into the locus for the mother, then signs MOTHER (M) again immediately followed by SAID (46).

(46) HN pause BS_{mother}
 trill trill
 MEET MOTHER MOTHER SAID 3 PIGS YOU GO WORK (3LP 0:04)
 They met their mother. The mother said, "3 pigs, you need to go work."

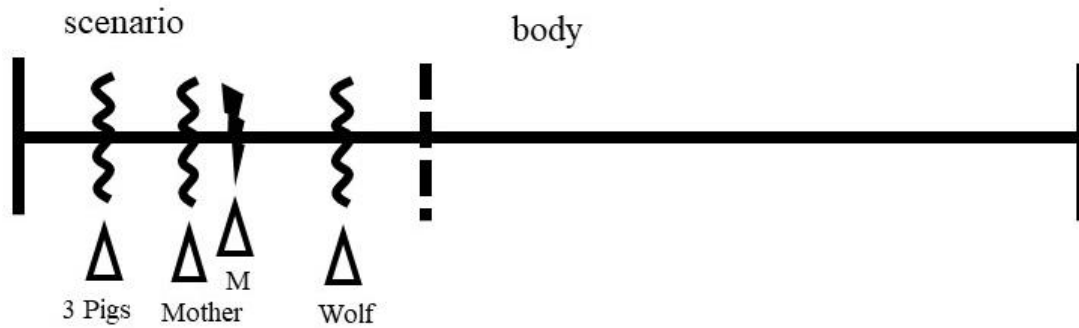


Figure 10 the introductions (squiggle) and mother reintroduction (lightning) in 3LP

5.1.3. Other references

References to entities that are not being introduced or reintroduced are classified as “Other references.” What distinguishes them is that they do not use heavy nouns (trills, repeats or holds) or repeated NPs. Other than simple NPs, they can also be referred to by eye gaze, point, or agreement.

Figure 11 shows an excerpt taken from the Tortoise and the Hare to give examples (NPs only) of the use of other referents.

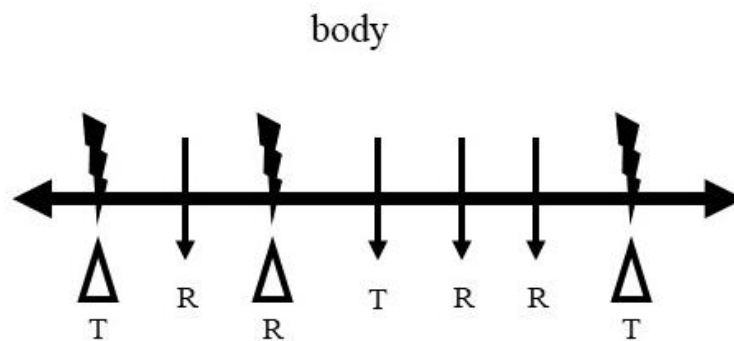


Figure 11 section :54-1:24 of TH showing distribution types with NPs

5.1.4. *How they are distributed*

The following tables show how the different types of referring expressions function in the three positions introduction, reintroduction, and other. Table 3 shows the referring types from the five 3rd person perspective stories—The Three Little Pigs, The Tortoise and the Hare, Pointy 3, The Washing Machine Story, and the New Tire Story.

	intro	reintro	other
N alone	1	39	31
N with modifier	4	9	9
heavy N	15	16	1
repeated NP	4	0	0
string of NPs	11	3	0
points	12	72	53
start of body shift	9	65	2
agreement/zero	0	1	307

Table 3 the referring types counts from 3rd person stories in the introduction, reintroduction and other references of entities

Table 3 breaks up the noun phrases into five different types, and also looks at points, starts of body shifts, and agreement/zero in reference to entities in the texts. Section 5.3 looks closer at how noun phrases are divided up in these texts. It's worth mentioning here that repeated NPs and strings of NPs rarely occur in reintroductions or in other references and that single nouns do not occur in introductions, but rather are accompanied by other NPs and points making a string of NPs.

Not surprisingly, there is no agreement or zero reference for entities being introduced; there is a high number of agreement and zeros in the other references category; and most body shifts start in the reintroductions. Additionally unsurprising is the almost even distribution of single nouns and nouns with a modifier in reintroductions and other references, since these are

the simplest type of noun phrase available. In particular, the New Tire Story includes both a deaf and a hearing man as the two main characters, so a modifier DEAF or HEARING is required to differentiate them.

The Birth of His Son shows different patterns, as it is told in first person. Table 4 shows the referring expressions in it.

	intro	reintro	other
N alone	4	7	2
N with modifier	2	0	0
heavy N	6	3	1
repeated NP	0	0	0
string of NPs	0	0	0
points	6	4	1
start of body shift	0	0	0
agreement/zero	0	0	48

Table 4 the referring types counts from 1st person stories in the introduction, reintroduction and other references of entities

These two tables are separated for the stark contrast in the production of these stories. However, the two types of stories are actually fairly similar in their referring expression distribution. There are a couple of differences—for one, there is no body shift in the Birth of His Son. The lack of body shift to reference a character is odd especially since the role shifts into the doctor and himself for a very short portion. These role shifts, though, are expressed through a change in facial expression and mannerisms.

Unlike the other texts, the only form of lengthening is heavy nouns.

Another difference not obvious in the tables is the fact that these references mostly happen in isolation. In Table 3, the referring types often happen in a sequence. For one introduction, a series of these forms happen together, like with the introduction of the Deaf man

in The New Tire Story. In the table, his eleven-part introduction is separated to show all the different types, but in reality, there is a string of NPs including a repeated NP, a heavy noun, three points, and one noun with a modifier. So, one character accounts for seven of the total instances. However, in Table 4, there are only a couple cases where different entries in the table count for the same instance in the story. For example, the narrator says THIS INDIANA, THIS USA, THIS HOSPITAL. These three examples are introductions that include a point and noun together, but there are no introductions, reintroductions, or other references that have more than two referring types together.

Comparison of the numbers for agreement and zero references shows that they are quite similar between the two tables. What is interesting is that the wife and baby of the Narrator (and narrator) are most of the zero references in this text. The narrator refers to c-sections and anesthesia and shots and that all happen to the wife, but she stops being referenced by name or title.

5.2. Roles of entities

Further insight into the way that entities are referred to is given by recognizing the roles that entities may play, both globally in the story and locally in a referential span. These global and local role types work independently, but not competingly, to explain how and why entities receive the referring expressions they do in introductions, reintroductions, and other references. Global roles look at entities over the entire text and group them based on their level of significance over the entire story, while local roles look at an entity in a single referential frame of the text. The following two sections delve into these roles and their usage.

5.2.1. Global roles

With regards to global roles, the most important distinction is between main entities and everything else (i.e. minor characters, other characters, and minor props).

Main entities are identified by their longevity in the story. They are introduced in the scenario and last throughout the rest of the story. Additionally, they interact with most of the other characters or props. These main entities are distinguished from the other entities because their introductions are lengthy and in the scenario. While other entities can have heavy nouns or repeated NPs, and some even have a couple noun phrases in a row for introduction, main entities typically have even more extensive introductions.

For example, the deaf man and hearing man in the New Tire Story are both introduced in the scenario with extended NP chains (47-48). The deaf man (47) has six NPs in a row, including heavy nouns and repeated NPs and the hearing man (48) has two NPs in a row. After each introduction, there is a segment explaining who these people are and their roles in the hospital in which they work.

(47) REPEATED NP TRILL NP PT₁ N PT₂ A PT₃

POSS ₁ FRIEND	POSS ₁ FRIEND	BEST FRIEND	IX _{def} MAN	IX _{def} DEAF	IX _{def} (NTS 0:02)
--------------------------	--------------------------	-------------	-----------------------	------------------------	------------------------------

My friend, my best friend, he's a man, he's deaf, he...

(48) ONE MAN BUS | IX_{hearing} HEARING DRIVE (NTS 0:28)
One hearing man who drives the bus...

Main entities do not need to be animate. In the New Tire Story and the Washing Machine Story, both the tires and the washing machine are main entities, which interact with most other entities and last throughout the story. They are introduced in the scenario with extensive referral types. Example (49) shows the tires’ introduction in the New Tire Story. This introduction includes an almost 3 second introduction—a trilled noun, with a fingerspelled¹⁴ version of the sign for TIRE, and the simple noun TIRE. The TIRE in parenthesis is for the buoy created as the left hand holds tire while the right hand fingerspells.

- (49) trill
left: TIRE (TIRE) TIRE
right: TIRE FS_{tire} TIRE OLD ALL OLD FLAT (NTS 0:39)
 The tires are all old and flat

Every main entity in the stories is in the following list. They all meet the criteria of main entity by being introduced in the scenario, occurring throughout the entire story, and interacting with most other characters.

¹⁴ This fingerspelling and all other in the corpus are done using the Ethiopian Sign Language fingerspelling system spelling Amharic words.

TH: rabbit, turtle

P3: Pointy 3

3LP: wolf

NTS: tires, deaf man, hearing man,

WM: washing machine, deaf man

BHS: (Fasil¹⁵)

In contrast, Minor and Other Characters and minor props¹⁶ have briefer introductions that are typically done in the body of the text. Example (50) is the introduction of the woman in the Washing Machine Story, where her introduction happens near the end of the story, rather than in the scenario.

(50) BS_{woman}
IX_{woman} WOMAN WHITE WOMAN IX_{woman} (WM 1:00)
There's a white woman...

This contrasts with the introduction for the washing machine, a main entity, which gets introduced in the scenario. Further, the length of its introduction (3.63 seconds) is greater than the one for the white woman (2.11 seconds) from the same story. Both are relatively long because they are introductions, but the one for the main character is still longer.

¹⁵ Because this story is told in first person, the main character is never introduced.

¹⁶ While these items can be distinguished based on literary devices, in this corpus they all respond the same way to introductions and length of reintroductions. Therefore, they are grouped together to contrast with major entities.

(51)

trill

MACHINE CLOTHES WASH CLOTHES WASH MACHINE (WM 0:01)

A washing machine

The Minor Characters in the stories can be seen in the following list.

TH: none

P3: forks, 3-Prong, chopsticks

3LP: 1st pig, 2nd pig, 3rd pig, mother

NTS: boss

WM: woman

BHS: Fasil, doctor

Distinct from the Minor Characters are what I call “Other Characters.” The following list shows the Other Characters from the stories. The difference between the two groups is whether or not they have speaking lines in the stories. Minor Characters interact with the main entities by exchanging dialogue. While Other Characters may still interact with main entities, the Other Characters do not have dialogue. Note that the 3 pigs are first referred to as one entity before they are divided into separate beings with interaction with the wolf.

TH: monkey

P3: knife, spoon, butter knife

3LP: 3 pigs (as a group, before they are distinguished)

NTS: repair guy

WM: hearing server, others, The hearing, The Deaf

BHS: son, wife, God

The same contrast in length between how main entities and all other entities are introduced also happens when main entities are reintroduced throughout the story, each time receiving more elaborate reintroductions than other entities. As example (52) shows, the hearing man from the New Tire Story is reintroduced with two NPs as the narrator shifts into his role.

(52) $\frac{BS_{\text{hearing}}}{IX_{\text{hearing}} \text{ MAN } IX_{\text{hearing}} \mid HEARING \ HEARING \ IX_{\text{hearing}} \frac{RS_{\text{hearing}}}{(NTS :44)}}$
The hearing man...

Reintroductions of non-main characters do not use extensive NPs. As example (53) shows, the minor character of the Forks in Pointy 3 are reintroduced in a similar situation, but their reintroduction is limited to a single lexical item and a point.

(53) $\frac{BS_{\text{fork}}}{\text{FORK } IX_{\text{fork}} \frac{RS_{\text{fork}}}{(P3 :38)}}$
The forks...

In summary, then, an entity’s global role determines how and where it will be initially introduced and the length and weight of its introduction and reintroductions.

5.2.2. *Local roles*

It is also important to classify an entity in terms of its local role in short spans of text. Four different local roles can be distinguished: Actor, Alternate, Cameo, and Prop.

Primary	Actor
	Alternate
Secondary	Cameo
	Prop

Table 5 the use of entities breakdown¹⁷

Any entity can serve in any of these local roles based on how they appear in what I refer to as “referential spans”. “Referential span” refers to a section of the story characterized by a shift in the story, normally a role shift. For example, in the Tortoise and the Hare, the narrator switches between three roles: rabbit, turtle, and the Narrator role. Each individual role shift is understood as defining a referential span in which the perspective of the story has changed based on who the narrator has become. Within a given referential span, deictics such as 1st and 2nd person, “here”, and “now” are interpreted relative to the primary character in the role shift.

¹⁷ I am grateful to Becky Melville who devised this categorization with me.

Figure 12 and 13 help explain how each role shift and reintroduction defines a referential span in this sense.

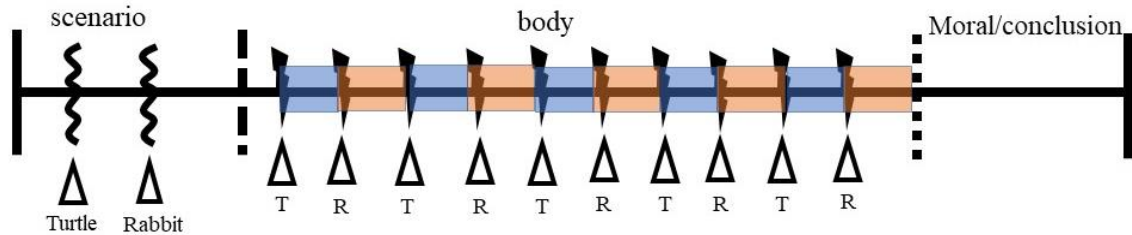


Figure 12 the different referential spans in TH based on role shifts

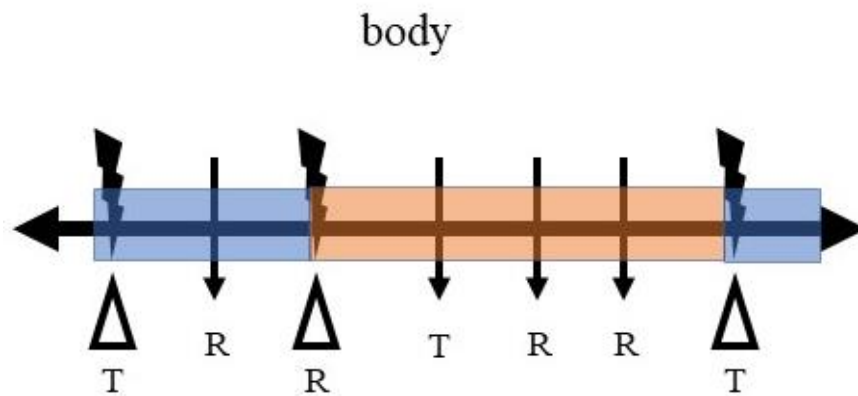


Figure 13 a zoomed in look at a couple of referential spans from TH based on the role shifts

However, referential spans are not based solely on role shift. In the Washing Machine Story, the narrator shifts into the role of the white woman (W), starting a new referential frame with the woman interacting with the washing machine (WM). But, part way through her role shift, she changes who she interacts with and starts dialoging with the deaf man (DM) and makes reference to “them” (T). When she body shifts, the referential span also changes to match the new perspective. This is shown in Figure 14.

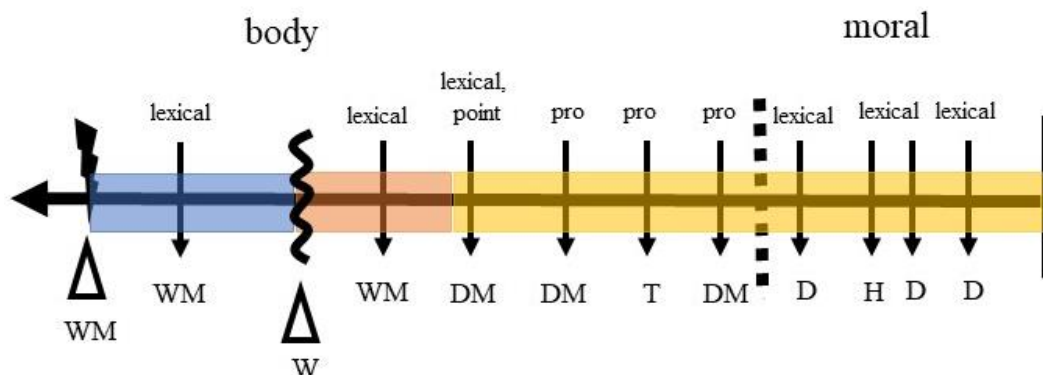


Figure 14 WM referential spans shown with different colors

This figure (13) shows that there are three different referential spans, but only two role shifts. The white woman is introduced and becomes the talker for the rest of the story. References for the deaf man are only a lexical item and pronouns. Then, as we go into the moral of the story where she talks about Deaf (D) and hearing (H) equality, the deaf man isn't even referenced. However, the woman keeps turning to where he stood as if she is talking to him.

5.2.2.1. Actors and Alternates

In the start of a referential span, as the narrator shifts from one character to another and the perspective changes, the character receiving 1st person pronouns also changes. For example, the narrator switches back and forth between the turtle and rabbit in the Tortoise and the Hare. When the narrator shifts into the role of the turtle, the turtle becomes first person, and this system calls the turtle an Actor. Then when the narrator role shifts into the rabbit, the rabbit has become an Actor. Crucially, while the rabbit is the Actor the turtle has become the Alternate, or the character receiving 2nd person pronouns. The Alternate can be seen, meaning it still has an active locus, by both the Actor and the audience, and the Actor can interact with it, meaning dialogue and verb agreement from the Actor is addressed towards the Alternate. But the only difference

between Actor and Alternate is that the Alternate is not currently role shifted into. Both roles are extremely salient given how the Actor can interact with the Alternate as if another person were in the referential span.

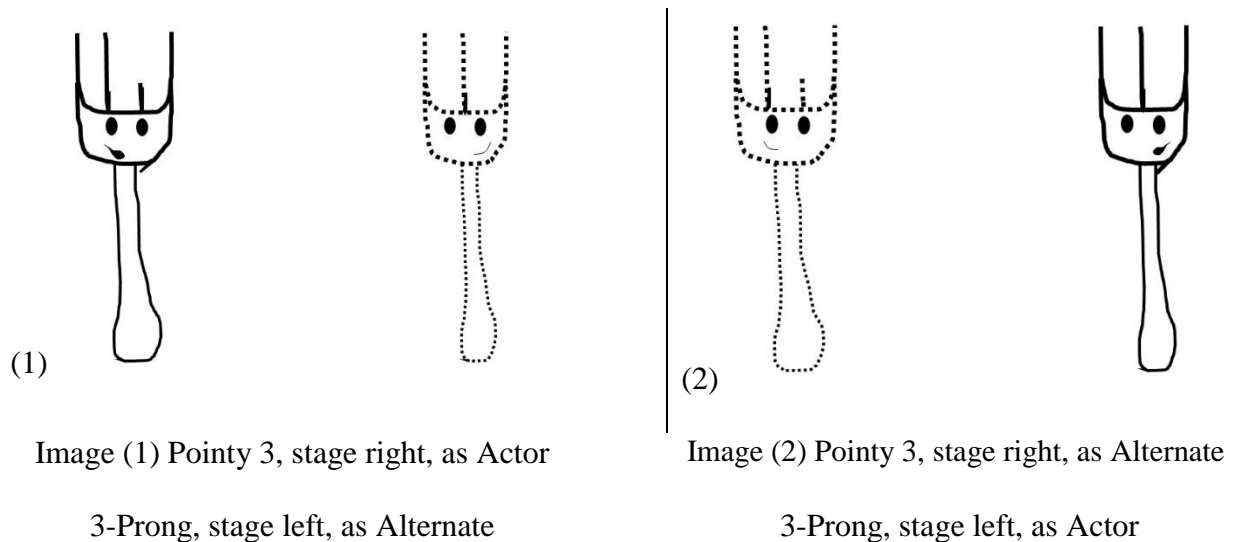


Figure 15 the comparison of two characters as Actor (solid lines) and Alternate (dashed lines)

Figure 15 shows the difference between Actor and Alternate. In Figure 15, the main character, Pointy 3, the Actor, is interacting with a minor character, 3-Prong, the Alternate. The Alternate is still “visible” to the audience even though the narrator isn’t in his role, because his locus is used for points, eye gaze, and agreement. In Image (1), Pointy 3, the Actor, still points towards 3-Prong as if he is there, as well as looking in his direction. Any verb or adjective agreement is towards 3-Prong’s locus. Likewise, when the roles are reversed, as in Image (2), Pointy 3 is now the Alternate and as such is the recipient of 2nd person pronouns.

Not every referential span needs an Actor and Alternate. When the narrator is in the Narrator role, there often is no Actor or Alternate. However, if the narrator were to refer to

himself or interact with the audience and they received first and second person pronouns, they would be the Actor and Alternate.

5.2.2.2. Cameos and Props

Cameos and Props are 3rd person entities used in a referential span. Props enter the story as a background entity that are used by the Actor or Narrator but are never the subject of a sentence. Once an entity becomes the subject of a sentence, but is still a 3rd person entity, it becomes a Cameo. For example, TIRE may become the subject of the next sentence and may be the subject in a number of contiguous clauses; however, if the signer starts talking about something else, then he or she will need to re-sign TIRE before bringing it back into the discourse, for it does not have a lasting locus.

Props are referenced and even introduced by single, simple nouns. Cameos, on the other hand, have more extensive introductions and reintroductions.

5.2.2.3. Referring expressions for local roles

The reason these categories are important is because they can be used to predict how an entity will be referenced based on its role in a referential span. An Actor will be referenced by a point, body shift, and a usually heavy noun to initiate the referential span, as the narrator shifts into a role. First person points and agreement thereafter reference the Actor. Further, the Actor is the subject of most clauses, and zero subjects are understood as referring to the Actor. But inside the referential span, most object agreement is towards the Alternate and second person pronouns are in reference to the Alternate. A Cameo is referenced by a 3rd person point and a (heavy) noun. Finally, a Prop is only referenced by a simple, non-heavy noun or a zero, without a point.

If an Alternate is referenced to change a referential span, a point and lexical item are used, as shown in brackets in example (54).

(54)	BS _{woman}	BS _{woman}					(WM 1:11)
	RS _{woman}						
	WHO WORK	[IX _{deaf} MAN DEAF] WORK NM-wow					
<i>“Who worked on the washing machine?” The deaf man did the work. “Wow.”</i>							

	Definition	Initiate referential span	Non-introductory referring types
Actor	Current character role shifted into (first person)	Point, BS, (heavy) NP(s)	Agreement, zero, 1 st person pronouns
Alternate	Character the Actor is interacting with (second person)	Point, NP	Agreement, zero, 2 nd person pronouns
Cameo	Entity able to interact (third person), is the subject		(point), (heavy) noun, zero
Prop	Entity the actor or Narrator can use (third person), but never the subject		Simple noun, zero

Table 6 the referring types and definitions with optional elements in parenthesis

Note that a referential span doesn’t start by initiating who is Actor and Alternate, because this stage is often done in narrator perspective with the Narrator role. But instead, this “initiate referential frame” happens as its own referential span in narrator perspective. For example, (55a) in the following example has the hearing man being introduced in the Narrator role with a lexical

item, point, and body shift, but his referential span as the Actor starts when the role shift as the hearing man starts.

Lastly, it is important to look at each referential span as its own segment and not depend on what happened in previous referential frames to shape the current one. What was an Actor or Alternate in the previous frame could be a Cameo or Prop in the current one and vice versa.

(55) (a)

<u>BS_{hearing}</u>									
		<u>RS_{hearing}</u>			<u>RS_{narrator}</u>		<u>RS_{hearing}</u>		
HEARING	IX _{hearing}	ASK	HEY	DEAF	IX _{deaf}		IX _{tire}	TIRE	(NTS 1:51)

The hearing man asked the deaf man, “Hey, these tires...”

(b)

<u>BS_{hearing}</u>				<u>BS_{deaf}</u>				
<u>RS_{hearing}</u>				<u>RS_{narrator}</u>				
FLAT	IX ₁	WANT	NEW	IX _{deaf}	MAN	DEAF	VERY	(NTS 1:56)

“...are flat. I want new ones.” Now, the deaf man was very...

(c)

<u>BS_{deaf}</u>				
<u>RS_{narrator}</u>				
WISE	SMART	WISE	THUMBS.UP	(NTS 1:59)

...wise and smart. Very good.

(d)

<u>BS_{deaf}</u>						
<u>RS_{deaf}</u>						
NM-skeptic	HOW	...	IX ₁	BELIEVE	NOT	(NTS 2:02)

The deaf man looks at the hearing man, “how?... I don’t believe it.”

This example (55) shows a portion of the New Tire Story with the referential frames identified by color. The **blue** is when the Narrator is role shifted into, the **orange** is for role shifts for the hearing man, and the **yellow** is for role shifts for the deaf man. Throughout this short segment of the story, the deaf man goes from being an Alternate, to a Cameo, and finally an Actor. When

the hearing man is the Actor in (55a), the deaf man is the Alternate, referenced with the agreement attached to ASK and HEY and the lexical item DEAF. Then, when the story shifts to the narrator's perspective in (55b), the deaf man becomes the Cameo. The Narrator is discussing the deaf man and says that he is very smart, making him the subject of the sentence, but he does not hold the role shift. But then in (55d), the deaf man is role shifted into and is referenced by first person pronouns.

The following tables look at the 26 referential spans in the Tortoise and the Hare. The first Table 7 shows how the referential spans are initiated. Seventeen of the 26 are set up when the narrator uses eye gaze to assume the Narrator role. But, what is interesting, is that all of the referential spans that are in character perspective are initiated with a point, body shift, eye gaze, and (heavy) NP. Even at the end of the story, when the rabbit has been shifted into three other times, when his last referential span is initiated, it still uses this heavily marked, four-part form. As a global role, one would not expect a main character to be referred to so heavily so late in the story.

	Character perspective IX, BS, EG, and NP	Narrator perspective EG with Audience
initiate referential span	9	17

Table 7 the manner in which referential spans are initiated

Table 8 shows the types of referring expressions used inside of a referential span (not the initiated portion of the texts). This table shows that inside a referential span, this text matches expectations for a saliency markings theory where the most salient entities are referenced with the least marked referring expression, i.e. agreement or zero references. But, entities that have a lower saliency use more elaborate referring expressions.

	NP	heavy NP	NP with IX	IX	body shift	agree/zero
Actor	3			1		20
Alternate	2					5
Cameo	3	3				13
Prop	4	1				

Table 8 how entities are referenced INSIDE a referential span

Since Cameos are the subject of sentences, but aren't role shifted into, they have a similar role as an Actor without the first person references so a similar number of agreement and zero references to Actors is to be expected.

Actors and Alternates tend to be permanent features in a story, while Cameos and Props are transient. If something becomes an Actor or Alternate, it means that it remains on the stage until the referential span is completed or has been removed by the narrator with a verb saying they leave or are now dead¹⁸. A Cameo or Prop, on the other hand, can be discarded from a referential span without explicitly stating their departure with a verb. Other cameos and props can be introduced and therefore a point as a pronoun no longer refers to the first cameo or prop, but the new one on stage. This then can expand to the use of these characters throughout the entire story. Actors and Alternates are often, but not always, global main and minor entities, while Cameos and Props tend to be other characters or minor props as defined in the previous section on global roles.

¹⁸ RIP pigs 1, 2, and 3.

5.3. Use of NPs in Ethiopian Sign Language

Noun phrases for reference can range in complexity from simple to complex. Let's first look at the Tortoise and the Hare story. When the rabbit is introduced (TH 0:06), and at every reintroduction after that (5 instances) a repeated noun is used, i.e. RABBIT RABBIT. However, any time the noun is used elsewhere in the body of the text, it is simple, i.e. RABBIT. The same is true for the turtle. For all the other stories told in third person, the same pattern occurs: the use of heavy nouns or strings of NPs is restricted to introductions and reintroductions.

For example, the Deaf Man's introduction in the New Tire Story has a repeated NP, lengthened single noun, NP, single noun, a stand-alone adjective and three points (56).

(56)

REPEATED NP		trill		NP		PT ₁	N	PT ₂	A	PT ₃	
POSS ₁	FRIEND	POSS ₁	FRIEND	BEST	FRIEND	IX _{deaf}	MAN	IX _{deaf}	DEAF	IX _{deaf}	(NTS :02)

The same entity is never referred to again with as many NPs. Though the next three reintroductions are IX MAN DEAF BS, they aren't as extensive as this initial introduction. Furthermore, the remaining NP references are either MAN DEAF without the point and body shift or, in one case, DEAF IX. Introductions consist of chains of several referring types, reintroductions have less, and when an entity is maintained, it has the fewest references and sometimes even none.

In section 5.1, entities are placed across a typical narrative layout of three parts: scenario; body; and moral/conclusion. Each part has a different referring type pattern. Figure 16 shows a visual representation of what is happening in the texts for individual entities in regards to heavy nouns by using the Tortoise and the Hare.

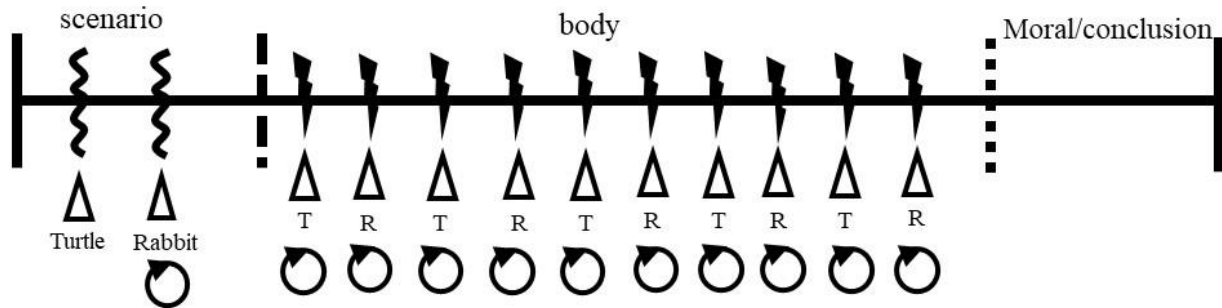


Figure 16 TH in diagram form with turtle (T) and rabbit (R) reintroduced (lightning) with lengthening (circle)

Figure 16 represents the repeated nouns used in the Tortoise and the Hare. As discussed in sections 5.1.1 and 5.1.2, each one is located in either an introduction or reintroduction with no instances of repeats for these entities in other positions. Furthermore, these introductions and reintroductions are done in narrator perspective.

Table 9 shows the breakdown of all main, minor, and other character NP references in the 3rd person texts and how the heavy nouns and string of NPs occur in either introduction or reintroduction sections. Remember, a heavy noun is one that has a repeat, trill, or hold; a repeated NP is a noun phrase repeated; and a string of NPs is like the previous example (56), where different NPs are used to describe the same thing immediately following each other.

	intro	reintro	other
N alone	1	39	31
N with modifier	4	9	9
heavy N	15	16	1
repeated NP	4		
string of NPs	11	3	

Table 9 the NPs counts from 3rd person stories

The significance of the numbers in this table is explained in the next few sections.

5.4. Heavy nouns: repetition, trills, and holds

Ethiopian Sign Language uses repeats and trills in three different ways: introduction, reintroductions, and self-correction. All trills and repeats occur in narrator perspective; however, entities do not **have** to be trilled or repeated in narrator perspective. The narrator is presumably monitoring the audience to make sure they are understanding what he is saying. While section 5.3 looked at heavy nouns in introductions and reintroductions, the narrator also chooses this tactic for self-correction.

5.4.1. Introduction and reintroduction

The most common use of heavy nouns and NPs is in initial introductions. Since new entities, especially subjects of following sentences, are important to the text, the tendency is to use one of the tactics mentioned in section 4.3, i.e. repeats, trills, or holds. When the Mother is first introduced in the 3 Little Pigs, MOTHER is trilled for 1.36 seconds and when the boss man is introduced in the New Tire Story, BOSS is trilled for 1.04 seconds. (For comparison, the next use of MOTHER only lasts .8 seconds and the next BOSS only lasts .26 seconds)

The second use of repeating, trilling, and holds is reintroductions. This happens in the body of the story as the narrator is shifting between characters. In Ethiopian Sign Language it is almost as if the story stops so that the subject for the following sentences can be reintroduced. These reintroductions do not have to be repeated or trilled, as you can see with the contrast of the wolf eating the first and second pig in the following examples (57-58).

(57) BS_{wolf}

repeat

IX_{wolf} WOLF GRAB₂ EAT₂ (3LP 1:40)

The wolf grabs and eats the 1st pig.

(58) BS_{wolf}

IX_{wolf} WOLF HAPPY GRAB₂ EAT₂ (3LP 2:13)

The wolf is so happy, he grabs and eats the 2nd pig.

Example (59) shows a trill happening in a reintroduction of the hearing man from the New Tire Story.

(59) BS_{hearing}

trill

IX_{hearing} MAN IX_{hearing} HEARING IX_{hearing} BUS DRIVER (NTS 1:23)

The hearing man who drives the bus...

5.4.2. Self-correction

A third use of a heavy NP is to correct a signing error. Towards the end of the New Tire Story (3:17), the informant starts talking about the deaf man. However, soon he realizes his mistake and changes to the hearing man (60). This results in a trill on the sign HEARING even though it hadn't been trilled for the previous three uses.

(60) (a)

BS_{hearing}

IX_{hearing} NOW IX_{hearing} BOY MAN DEAF OLD IX_{hearing}

The old deaf man,

(b)

trill

lean front

WRONG HEARING IX_{hearing} (NTS 3:13)

I mean the hearing man...

This trill differs from those that occur on the same sign previously: the body leans forward and there is an eyebrow raise.

What's interesting about this is that the deaf man is clearly set up on stage left and has been since the hearing man entered the scene. All points and verb agreement have him on stage left. At this point in the text, the narrator has just directed three points to the locus for the hearing man, then signs the wrong word, DEAF, and then self-corrects to HEARING. The vehemence of the self-correction suggests that the points by themselves were not meaningful to make clear the referent; it was important to get the lexical noun right.

5.4.3. *What the narrator says about repetition*

These different types of lengthening happen so frequently throughout the texts that I asked the narrator why he uses this device. He explained that out in the villages, people might not understand Ethiopian Sign Language well, so he repeats, trills, and lengthens in various ways so that they can follow what is happening. But, in the cities and towns, people understand the language better, so he uses lengthening less because he “is more comfortable.” When he feels

comfortable, he moves on without the repetition. I have also witnessed, however, heavy nouns, repeated NPs, or string of NPs even though I know he knows the audience knows what he's saying.

This explanation seems to line up with when he uses lengthening techniques in these stories. They are only used when an entity is being introduced or reintroduced in a discourse, seemingly to switch over to their perspective of the story. It also makes sense that the narrator would want to make sure the audience knows who he is referencing, since once he has shifted to the perspective of a particular entity, that entity may be the subject of multiple clauses with relatively light references.

5.5. Points

Points, in Ethiopian Sign Language, are used in a couple different ways. The biggest distinction can be seen between narrator and character perspective.

5.5.1. *Narrator perspective*

Points used in narrator perspective are primarily as articles or demonstratives in NPs. For example, in *The Tortoise and the Hare*, there are eleven points. Five points are towards the rabbit, five towards the turtle, and one towards the monkey. All eleven of these points happen in narrative perspective and as a part of a larger noun phrase as can be seen in examples (61-63).

(61) BS_{monkey}

IX_{monkey} MONKEY RESPONSIBLE GUN (TH 0:17)

The monkey was responsible for the gun

(62) BS_{rabbit} repeat

IX_{rabbit} RABBIT RUN (TH 0:38)

The rabbit was running

(63) BS_{turtle} repeat

IX_{turtle} TURTLE PATIENT SLOW (TH 0:54)

The turtle was patient and slow

These examples (61-63) are also all either introductions or reintroductions of these characters. This is typical of points in narrator perspective. Since all introductions and reintroductions happen in narrator perspective, most points in this perspective are used in this way. Sometimes, there is more than one point in each introduction or reintroduction as can be seen in example (64).

(64)

narrator
IX _{woman} WOMAN WHITE WOMAN IX _{woman} (WM 1:00)

The white woman

Here, the white woman from the Washing Machine Story is being introduced with two NPs in a row. Each NP has its own point towards the same location, both indicating the woman.

Then, when the white woman is referenced again by a point to her locus (as a demonstrative), it occurs in narrator perspective. The narrator breaks character perspective to make eye contact with the audience and restate who he is talking about. Example (65) is a continuation of the previous example (64).

(67) RS_{woman}
character
 IX_{3pl} TRY (WM 1:19)
They all tried.

The previous examples are during role shift, but more specifically when there is constructed dialogue. This is also true for the demonstrative usages of points in character perspective. In the New Tire Story, the deaf man approaches the boss to explain how the hearing man was deceitful. When he approaches, he says example (68).

(68) character
RS_{deaf}
 IX_{hearing} MAN HEARING IX_{hearing} DRIVE BUS LIE (NTS 3:00)
You know the hearing man who drives the bus? He lied!

The following table shows the counts for points in character versus narrator perspective. There are six points used in narrator perspective as pronouns, at least they are unaccompanied points. These are all for inanimate objects, split between the tires in the New Tire Story, the washing machine in The Washing Machine Story, and the towns in Pointy 3.

	Character	Narrator
demonstratives	6	130
pronouns	28	6
Total # of points	32	136

Table 10 number of points in each perspective

As Table 10 shows, character perspective uses points as demonstratives less often than narrator perspective does, and narrator perspective uses points as pronouns less often than character perspective does. Since character perspective, by nature of the role shift, has characters referenced in first and second person, the heavy use of pronouns is to be expected. In narrator perspective, pronouns are used for Cameos that have been set up as the subject recently. Also, since entities are introduced and reintroduced in narrator perspective, the high use of demonstrative points in this perspective is no surprise.

Table 10 also shows that the number of points in character perspective is significantly lower than the number of points used in narrator perspective. This is partially credited to the fact that the narrator is in narrator perspective for longer than he is in character perspective. But, since narrator perspective is where Actors are referenced (introduced and reintroduced), and the typical referencing system for Actors is point, body shift, lexical item, it helps explain the high number of demonstrative points in this perspective.

5.6. Agreement

Unlike points, which mostly occur in narrator perspective, most instances of agreement occur in character perspective. All instances of verb agreement in these stories occur as other references; verb agreement is not used in introductions and reintroductions.

All verb agreement with a subject occurs after the subject has been clearly identified, as in (69).

- (69) RS_{pointy3}
 POINTY 3 ... LOOK.AROUND ₁MEET_{forward} (P3 1:04)
Pointy 3 looked around and then he met something!

Here, the subject of the second verb MEET, which is an agreement verb in this language, is “1” (first person agreement), and because of the role shift making Pointy 3 an Actor, we know that this first-person reference is to Pointy 3.

However, an object does not have to be established before an agreement verb can be used. In example (70), the object of SEE is not identified until after the fact. But, because of the agreement that is connected to SEE, we know that what he sees is the butter knife.

- (70) character narrator
 POINTY 3 WALK SEE_{left} IX_{left} BUTTER KNIFE (P3 2:06)
Pointy 3 started walking. Then he saw something! It was a butter knife.

SEE ends towards the left and the point by the narrator in the next sentence is towards the same locus, identifying the referent of the verb agreement as the BUTTER KNIFE.

In the New Tire Story, there is one character, the tire repair man, often locally a cameo or prop, who is referenced only by agreement or zero reference. He takes the old tires off, brings the new tires over, and puts them back on the bus without ever being referenced explicitly with a NP or point. Then, later in the story, the deaf and hearing men go back to the repair shop to have the tires checked again. The deaf man tells the inferred repair man to take off the tires and look

inside. However, throughout this entire sequence, the repair man is never referenced by name, job title, or anything other than verb agreement and zero reference.

5.7. Saliency marking

At first glance, Ethiopian Sign Language does not seem to comply with typical saliency marking patterns e.g. Gundel's Givenness Hierarchy theory (Gundel, Hedberg, and Zacharski 1993). Saliency markings depends on fewer and shorter references for entities that are more salient and highly marked references for less salient entities. In contrast, throughout the whole Ethiopian Sign Language texts, long references are made towards the main and most salient characters. The narrator uses heavy and repeated nouns again and again for the same characters. Conversely, completely unestablished characters can be referred to with zero references initially.

Similarly, dramatic body shifts, not just turning but moving from one position to another, are used to accomplish role shift, in contrast to other sign languages where the actual movements used can be very subtle. Saliency marking patterns would lead one to expect that highly-activated entities, such as Actors and Alternates, would need only subtle role shifts, not highly-obvious ones.

For example, let's look at the 3 Little Pigs, just the sequence between the wolf and the first pig.

(71) (a) BS_{wolf}

trill

IX_{wolf} WOLF WOLF WOLF WOLF VERY HUNGRY VERY HUNGRY (3LP 0:57)

There is a wolf. He is very, very hungry.

(b) BS_{wolf} BS_{pig}
RS_{wolf} RS_{pig}
 IX_{left} PIG wolfSEE_{pig} IX_{pig} PIG pigSEE_{wolf} SCARED (3LP 1:11)
The wolf sees a pig. The pig sees the wolf and gets scared.

(c) BS_{wolf} BS_{pig}
RS_{wolf} RS_{pig}
 IX_{wolf} WOLF COME.HERE IX_{pig} PIG NO.NO (3LP 1:20)
The wolf says, "come here." But the pig replies, "NO NO!"

(d) BS_{wolf}
RS_{wolf} RS_{wolf} RS_{wolf}
 IX_{wolf} WOLF ANGRY MOUTH BLOW WIND BLOW (3LP 1:26)
So, the wolf gets angry! The wolf starts to blow and blow...

(e) BS_{wolf} BS_{pig}
RS_{pig}
 COLLAPSE IX_{pig} PIG AHH POP.UP (3LP 1:30)
...and the house falls down. The pig screams and pops up...

(f) BS_{pig} BS_{wolf}
RS_{pig} RS_{wolf}
 PIG LOOK.AROUND IX_{wolf} WOLF GRABS_{pig} EATS_{pig} (3LP 1:36)
... and looks around, but the wolf grabs him and eats him.

There are patterns here and discrepancies that need to be discussed in regards to a saliency theory. As one can see, at every character switch there is a body shift, a point, and the noun for the intended character. These are the only two characters on the scene and a language such as ASL would not use nearly as many or as heavy referring expressions to distinguish

between the wolf and pig especially since they have already been set up in space. A saliency theory would refer to them as high on a saliency chart which means they tend to¹⁹ occur with few or zero references. In contrast, in example (71e), COLLAPSE is used without a referent (similar to the zero references made to the tire repair man in the New Tire Story). It is assumed that it is a house, that falls down since the story is the 3 Little Pigs, but nothing in the previous sentences indicate a house and in fact before these sentences, a house is never mentioned; the 1st pig just gets dry grass and we never learn what he does with it. Since the pig's house would likely be "uniquely identifiable" in Gundel's Givenness Hierarchy, it should definitely have a reference type other than zero, which should be reserved for "in focus" entities. Unlike "in focus" entities that can borrow reference forms from lower layers of saliency, lower layers cannot borrow from higher ones. So, in this case, the zero reference to an entity in a "uniquely identifiable" role does go against Gundel's Givenness Hierarchy theory. Then, in (71e), the pig is referenced again with a noun while the narrator is still in the pig's correlated locus. All of these things appear to run counter to what a saliency theory would claim to be required or normal.

But, if the data is looked at as separate stories, separate sections, separate pieces to analyze, then things start to fall in line with what saliency markings tend to expect for all languages. For example, consider (72), which reproduces the second half of line (71f).

¹⁹ While some theories claims that highly activated entities can use a lower form of reference, the strong tendency is to use zero or few.

(72)	<u>BS_{wolf}</u>	
	IX _{wolf} WOLF	GRABS _{pig} EATS _{pig} (3LP 1:36)
	<i>but the wolf grabs him and eats him.</i>	

This section from (71f) should be looked at as a full story. In Gundel’s Givenness Hierarchy theory, reported speech is treated differently than narrative text in a story. Because the shift into a new role changes the perspective, view point, and “knowledge” of the narrator, the story has changed and doesn’t contain all the context that was previously mentioned. Therefore, role shift could be treated as reported speech (Grosso 2017: 31). Inside this reported speech, example (72), we have a reintroduction (an initiated referential span) then two verbs that don’t use explicit referents. If pig is understood to be an Alternate and the wolf is the Actor, they are both highly salient since they were recently body shifted towards and have both recently been sentential subjects. Therefore, they can be referenced by agreement, as is done here and as we would expect of an entity with this level of salience.

Additionally, very few points occur in this area of a story, and when they are used, they are mostly used as pronouns; heavy and repeated nouns do NOT occur in this part of a story, only in introductions or reintroductions; verb agreement occurs here very frequently; all of these align with the theory that pronouns, simple nouns, and verb agreement are referring types used higher in the hierarchy. For once the body is shifted and then the character role shifted into, there is no wondering who the subject is, where the action is coming from, or who’s initiating action. All of these are assumed to be centered on the entity who holds the role shift. Therefore, I propose that role shift automatically puts Actors and Alternates into the highest level of saliency, and that status continues the entire time the role shift persists.

Inside the scope of each role shift, expectations for a saliency markings theory are met. However, if applied to a complete, full story, the theory does not account for reference in role shift situations.



USE OF LOCI

An important aspect of reference tracking in signed languages is loci. Loci are used with points, eye gaze, body shift, and verb agreement to refer to entities in a text. Any disruption in the use of loci thus interferes with the referencing system. This chapter looks at disruptions of expected loci use in Ethiopian Sign Language and how they affect the referencing system.

6.1. The variability of loci with points

Generally, sign languages use points consistently to identify loci in a discourse, so that once a locus is set up, a point to it can be sufficient to explain which entity is being referenced (Engberg-Pedersen 1993). Consistent points can be depended on to know which entity is being referred to; i.e. if a signer sets up an entity on stage left, all following points to that location would refer to the same entity. Further, another entity would not be given the same locus, but a distinguishing one, such as stage right. However, in Ethiopian Sign Language, points/loci are less dependable.

While the narrator of this corpus uses pointing quite regularly, the specific location pointed to does not have the same functional load as it does in ASL. For example, in the beginning of *The New Tire Story*, the main character, the deaf man, is on stage right. During the first 25.5 seconds of the story, there are five points in this direction referring to the deaf man. Immediately following this introduction, the second main character, the hearing man, gets

introduced and is also on stage right with five points in this direction. In other words, these two characters are not distinguishable by location since they are both on stage right.

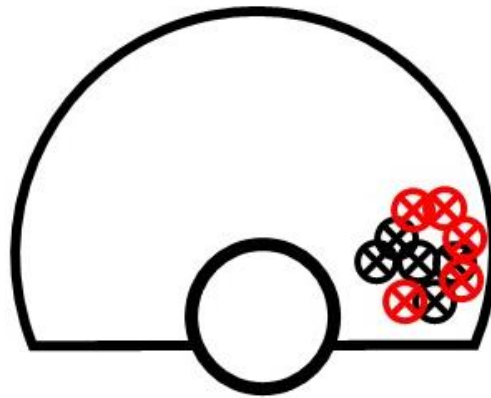


Figure 17 loci in introduction of NTS to the deaf man (red) and the hearing man (black).

Figure 17 shows all the points in the introduction when the narrator is in narrator perspective. As Figure 17 shows, all points have been made to stage right. Here we have two characters in the same locus. This, however, doesn't lead to confusion because the narrator frequently uses the lexical item with the point to indicate which character he is referencing. In other words, in this part of the story, the specific location pointed to is not informative. The pointing gesture still serves as a determiner, but unlike what would be true of sign languages like ASL, its reference is not determined by the location pointed to, but rather by the immediately-preceding context, in the same way that is typical of a spoken language.

In Figure 18, the narrator has just signed example (73), then steps to stage right. Where the previous Figure 17 shows all the points from the scenario, example (73) occurs when the scenario has just ended and is the first clause from the body of the text. When the narrator sets up the switch from the role of the Narrator to the role of the hearing man by stepping to stage

right, the locus now unambiguously represents the hearing man, because of the points and lexical items associated with the body shift.

(73) BS_{right}
 IX_{RIGHT} MAN IX_{RIGHT} HEARING IX_{RIGHT} (NTS 0:44)
Hearing man

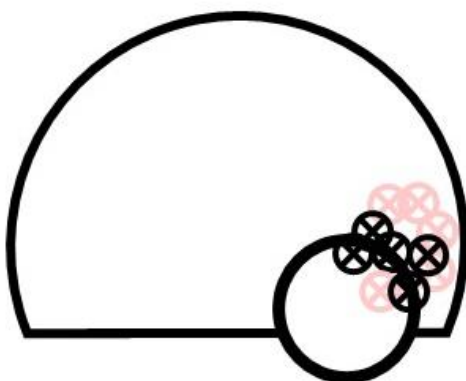


Figure 18 the body shift into the hearing man (black) cancels out previous points (pink) to the deaf man

By doing this, he cancels all the previous points to the right for the deaf man and gives the space to the hearing man. The deaf man then needs a new locus, so he is then set up on stage left, as shown in example (74) and Figure 19.

(74) BS_{right}
RS_{hearing}
 IX_{RIGHT} MAN IX_{RIGHT} HEARING IX_{RIGHT} HEY QUESTION DEAF MAN IX_{LEFT} (NTS 0:44)

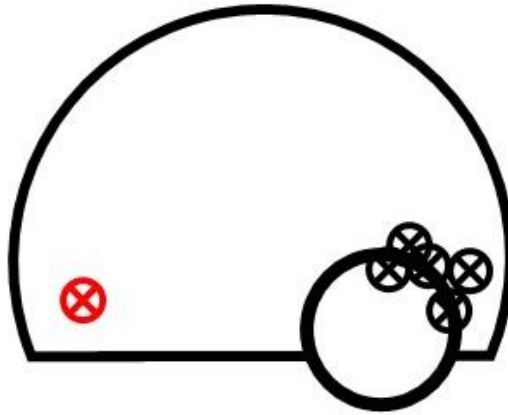


Figure 19 the first point to the new location for the deaf man from the body shift into the hearing man

Example (74) and Figure 18 show how the deaf man is established in a new location stage left.

Despite all the previous points made to the right for the deaf man, none of them matter when the narrator steps to the right to take on the persona of the hearing man. Because the deaf man and hearing man interact, and because the hearing man is set up on stage right, the deaf man has to be set up in his own distinct locus, unlike during the scenario and through the introduction, which are carried out in narrator perspective. To do this, the narrator breaks out of character perspective temporarily, looks at the audience and says DEAF MAN IX to show who the hearing man is talking to.

All this is to say, while pointing is used by this narrator quite frequently, the locus pointed at is not necessarily a reliable indicator of which entity is referred to. It is not until loci are used for role shift that they become reliable indicators of different entities. Similar examples of unreliable points are found in all the other stories except Tortoise and the Hare.

Similar usages of points, less consistent than in ASL, have been reported for other sign languages. For example, Hendricks (2008: 163-201) noted the use of points in Jordanian Sign Language and found they, too have a low functional load. While not completely similar to

Ethiopian Sign Language, she found that Jordanian Deaf do not tend to use points to set up a character in space. The few storytellers who used a point to set up a locus for an entity didn't refer back to the same location throughout the remainder of the story (Hendricks 2008: 179). When pointing was used in Jordanian Sign Language, it wasn't used by itself; "hence, localization is not used to uniquely identify a referent in these cases, but functions as additional information" (Hendricks 2008: 180). The same is true for Ethiopian Sign Language in regards to points used in narrator perspective.

6.2. Body shift

While body shift can be a meaningless change of position, like a fidget, it becomes meaningful when shifting into a clearly-identified locus. Unlike points, body shifts into a locus have significant functional load.

Drawing on what we learned in the previous section (6.1), the important part of the change in Figure 20, which repeats Figure 18, is the fact that the narrator shifts into the locus for the hearing man.

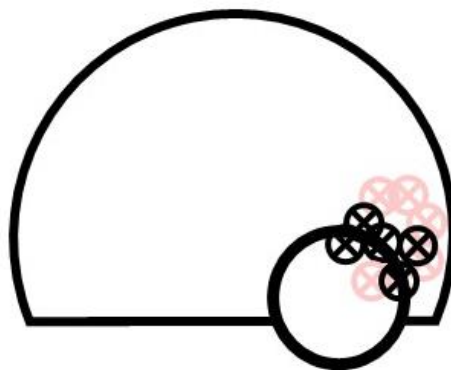


Figure 20 the body shift into the hearing man (black) cancels out previous points (pink) to the deaf man

The multiple points to stage right for the deaf man were cancelled not when the narrator pointed towards the same location for the hearing man, but when he actually stepped into the locus. This seems to be an accurate portrayal of the setup of a locus. Points do not reliably link an entity to a locus, but once the body has shifted, the location does not change for an entity unless the entity itself changes location in the story.

For example, in the New Tire Story, the deaf man's locus was (eventually) set up on stage left. While representing the deaf man's interaction with the hearing man, the narrator faces stage right to agree with the locus for the hearing man. But, when the deaf man talks with the boss about the hearing man's behavior, the narrator shifts his body to face stage left and steps slightly towards stage right. This is all done while in the role of the deaf man. This is a natural way to represent the deaf man's movement in the story to go talk to the boss, using an actual movement in signing space.

Another way body shift occurs in Ethiopian Sign Language is when an entity becomes the only one on the scene. In the 3 Little Pigs, the wolf eats each of the three pigs in turn. Starting in his locus of stage right, the wolf proceeds to grab the second pig and takes a small step towards stage left. After the pig (pink circle) is eaten the narrator takes another step towards stage left ending in left-center stage as can be seen in Figure 21. The narrator then says example (75).

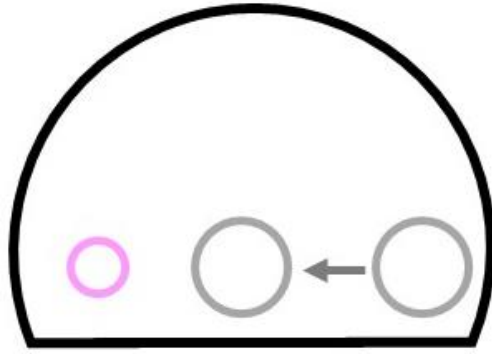


Figure 21 the wolf movement from right to left-center stage as the pigs are eaten

(75) BS_{left} pause pause

IX_{front} 3RD PIG WOLF LOOK (3LP 2:20)

RS_{wolf}

Over there is the 3rd pig. The wolf watches...

Understand that the body shift in example (75) is not to move into the role of the pig, but rather the wolf having moved towards center stage. Figure 20 shows the movement for the wolf. The narrator does not step completely to stage left, but because there is no pig to “step on,” the wolf’s locus expands. In this instance, the narrator has moved across stage, but since there is no one there to compete with the wolf’s existence, there is no confusion. When the next pig enters the scene, however, the wolf moves back to stage right and gives stage left back over to the pig.

Example (76) is a continuation of example (75), happening immediately after example (75) ends.

(76)	<u>RS_{wolf}</u>	<u>RS_{pig}</u>	<u>BS_{left}</u>	FENCE	LOOK.THROUGH.FENCE	IX _{left}	PIG	WHAT	(3LP 2:26)
<i>The wolf looked through the pig's fence. And the pig thought, "what?"</i>									

The narrator introduces a new entity with the fence, so he breaks character perspective to tell the audience what he is looking through, then enters it again, all still in left center stage. Then, the narrator reintroduces the 3rd pig as an Alternate/Actor, not just a Prop. When this happens, the narrator does the typical reintroduction process of point, body shift, noun, and role shift.

This change in loci of an entity throughout a story proves to be the case in all six stories. The Three Little Pigs and the New Tire Story have already been discussed in this section, but they are not alone. The Washing Machine Story has the washing machine set up on stage left, while all the other characters that enters the scene are on stage right: the deaf man; the white woman; and the cleaners. However, when the white woman starts to interact with the deaf man, she moves to stage left with a body shift and role shift and the deaf man stays on stage right.

Pointy 3 has Pointy 3 start out on stage left and the forks on stage right. The narrator decides to move Pointy 3 to stage right and repeats the introduction to show that Pointy 3 has moved, then the narrator body shifts and role shifts into Pointy 3's character and that locus is used to refer back to Pointy 3 for the remainder of the story.

The Birth of His Son is somewhat different from the others, presumably because it is told in first person. It has barely any body shift at all and only two characters have a role shift. But, there is the same variability of points to the wife – one to stage right, one to stage left – but both are followed by the NP MY WIFE so there is again, no confusion.

Interestingly, eye gaze and agreement are affected by the body shift/established locus similarly to points. Before a body shift followed by a role shift – they tend to be toward the

locus for that character set up by a point. But, after the role shift, all eye gaze and agreement functions with the role shift.

NON-USE OF ENTITY CLASSIFIERS

Even though entity classifiers are a useful part of most sign languages, they are surprisingly absent from the stories in this corpus. Instead of using miniaturized representations of a situation with entity classifiers on the hands, the language uses life-sized representations with the whole body. For example, rather than using an entity classifier to represent the rabbit hopping forward quickly away from the turtle at the beginning of their race, the narrator uses the lexical item hop and physically moves his body forward in a bouncing step movement (TH 0:27). Throughout the corpus of data used in this thesis, there is no usage of an entity classifier.

Further, in other interactions and elicitation sessions with the narrator, I have observed no obvious entity classifiers. In 2015, for a Field Methods class at Summer Institute of Linguistics at the University of North Dakota, I spent 80-90 hours with the language, talking with and learning from the narrator. During this time was when I first realized that Ethiopian Sign Language does not seem to use entity classifiers. To test this theory, I showed action-packed video clips to the narrator and asked him to tell the story in Ethiopian Sign Language. For example, after viewing a clip of Jackie Chan riding a bicycle through a crowded street, the narrator hopped on his “imaginary” bicycle and continued to repeat what he saw Jackie Chan do, without once using an entity classifier. Several other stories and conversations were recorded during this class all resulting in elaborate, entity-classifier-free videos. In short, although I am not ready to claim that the language does not have them, if it does, they are rare and noticeably absent from contexts where other sign languages would use them.

Instead of using entity classifiers, the narrator takes on the persona of the entity, in role shift. In the Tortoise and the Hare, for example, the rabbit takes off fast, running away from the turtle. An entity classifier in a language like ASL would show this with the hands taking on the handshape of a four-legged being and having it hop forward, the arms extending away from the body. The hands may also speed up or slow down to copy the speed of the rabbit. None of this uses lexical signs for they are not needed because the motion and orientation of the classifier iconically represent the action. In this story (TH 0:27), however, two lexical signs are used: HOP and FAST. Additionally, the narrator actually steps forward as the rabbit is zooming along with the arms staying the same distance away from the torso the entire length of the sign. The narrator takes on the persona of the rabbit as noted with his intense facial expressions.

Comparing this to an ASL version of this story (ASL TH 1:17), at another point the storyteller uses an entity classifier to show the rabbit moving to the side of the road (CLClaw3x2: “4-legged creature hop to left”) (77).



By comparison, at 0:46 of the same Ethiopian Sign Language story, the narrator again uses lexical items in a context where most sign languages would tend to use entity classifiers, as seen in example (78).

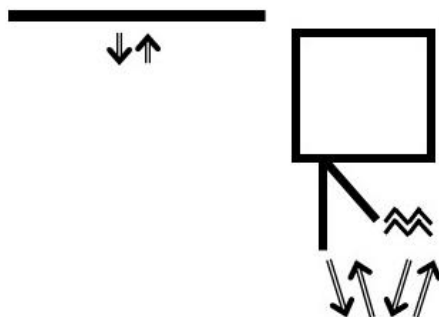
(78) BEST IX₁ GO SLEEP TREE SIDE-OF-TREE LAY AGAINST (TH 0:46)

“It would be better if I took a nap against that tree.” So, the rabbit laid down.

When the hare goes to the tree, a lexical sign GO is used; this sign does not change in any way to match the entity. When the hare lays against the tree trunk, the narrator lays his own head in the palm of his hand, just as he would if he laid his own head on a pillow, bed, etc. In other words, the verb does not vary depending on the type of entity doing the action, redundantly indicating what the audience already knows from other factors such as role shift. In short, to describe the actions of an entity (participant), the narrator in these Ethiopian Sign Language stories uses lexical signs and role shift rather than entity classifier constructions. However, it is important to remember that this data is based on one signer and therefore does not give a conclusive look at the language. Therefore, while this is strong evidence, the claim that Ethiopian Sign Language does not have entity classifiers needs deeper and broader analysis before it can be completely accepted.

It must be pointed out that lexical items sometimes look like entity classifier constructions. For example, the Ethiopian sign for WALK looks like two legs moving and is the same handshape that ASL uses as a classifier for a human walking (79).

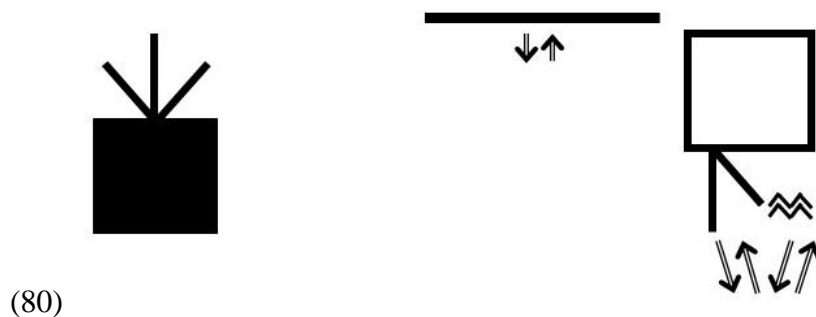
(79)



However, this sign in Ethiopian Sign Language is not a classifier construction because it does not adjust to iconically represent the manner of the action or characteristics of the referent.

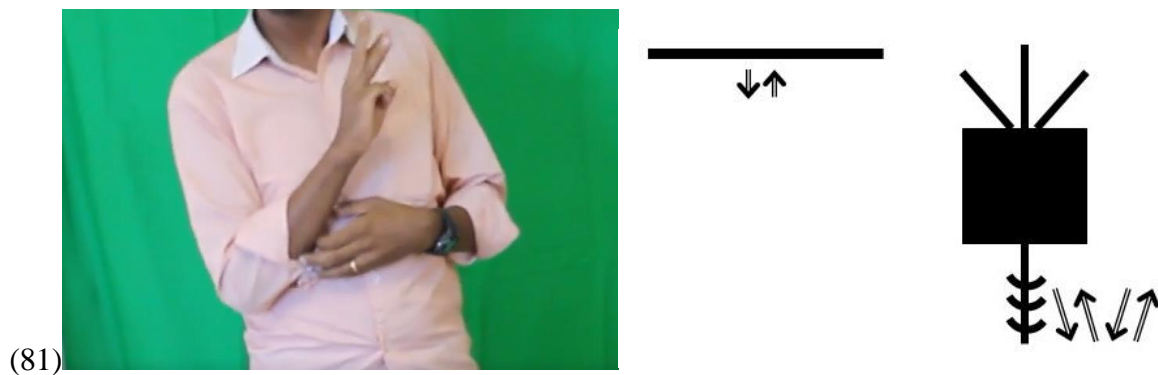
Something with four legs or no legs (meaning it would have to hop, like a fork) still uses this same handshape to show WALK. These changes, such as the shape of the person/animal walking, are done with separate lexical items as modifiers. This verb also does not change its motion to represent different paths. The sign starts near the body and ends farther forward away from the body; however, it does not curve or turn directions mid-sign like an entity classifier construction would do. In other words, although this sign is superficially similar to classifier constructions in other sign languages, it is simply an uninflected lexical sign in Ethiopian Sign Language.

This sign is used in the Pointy 3 text. At time stamp 0:54, Pointy 3 starts walking through a forest (80). Here, the narrator signs the entity (Pointy 3), then uses the lexical item WALK to describe Pointy 3's movement.



Signing POINTY 3, the narrator is in narrator perspective simply telling the audience who is doing the action. WALK, however, is signed in character perspective where the narrator moves his body the way Pointy 3 would move as his hand signs WALK.

There is one apparent counterexample to the claim that entity classifiers are not used in Ethiopian Sign Language. In the same story, the narrator uses a W handshape, rotating at the wrist, to describe the character walking, instead of using the lexical sign WALK (1:26) (81).



This sign looks the same as the sign WALK, but with a different handshape and orientation and no finger movement, and it does in fact mean “walk.” Likewise, other colleagues have noticed WALK take on the index handshape with the same movement and the full body movement of stepping forward can occur with the production of the sign. Knowing this, it appears that the

sign WALK may take on entity classifier characteristics. However, the only thing that can change in the sign is the handshape. It does not take on different motions based on where the entity walks, or other characteristics of a classic entity classifier construction. There are two possible explanations for this: 1) the narrator told his version of the story immediately after seeing the ASL version, in which the storyteller used this same classifier (although with changing movement involved) repeatedly (Stone n.d.), and so this may be an instance of borrowing from ASL. 2) This is indeed an entity classifier, but Ethiopian Sign Language uses them in only a very restricted way. Instead of having a whole construction miniaturized on the hands, a single handshape may change to represent the entity type, but the full body continues to perform the “verb” or action part of the construction.

Since there are not other cases of this adjustment of an established lexical item in the corpus, and none could be elicited during research and discussion, it cannot be said for certain which explanation is correct, but it appears that entity classifiers, as traditionally understood, are rare or nonexistent. Certainly, the language does not handle entity classifiers the way one would expect.



FINAL THOUGHTS

Entity classifiers, local roles, body shift as the referring form as opposed to role shift, and a flexibility of loci are all ways Ethiopian Sign Language has proved different from what was previously known about signed languages.

Entity classifiers, once believed to be universal in all signed languages are not used in Ethiopian Sign Language, but the language has no problem explaining the same concepts and ideas. Their depiction has just moved to full body and handling classifiers to fill the gap.

Local roles prove to be quite necessary to explain all the different patterns for entity referrals in Ethiopian Sign Language, but they could be this useful in all languages. We all tend to know what we want to talk about and who we want our main characters to be, but when we actually get into a story, our plans don't necessarily carry on. Local roles can help explain that. When we look at all stories or discourse from a local roles perspective, a variety, from long winded introductions to no introduction at all for the same level of character tend to be acceptable.

Body shift is obviously a referring type, but role shift seems to fit better as a shift in perspective solely. While it's most prominent in this data, I would be curious to see if it were true in other signed languages. This could help solve problems other signed languages are facing trying to fit role shift into Gundel's saliency marking hierarchy.

Finally, loci being dependent on body shift followed by a role shift is a concept I have never encountered before. But, when a language uses lexical items as plentifully as Ethiopian Sign Language, having sturdy loci for your entities to stand on becomes less important.

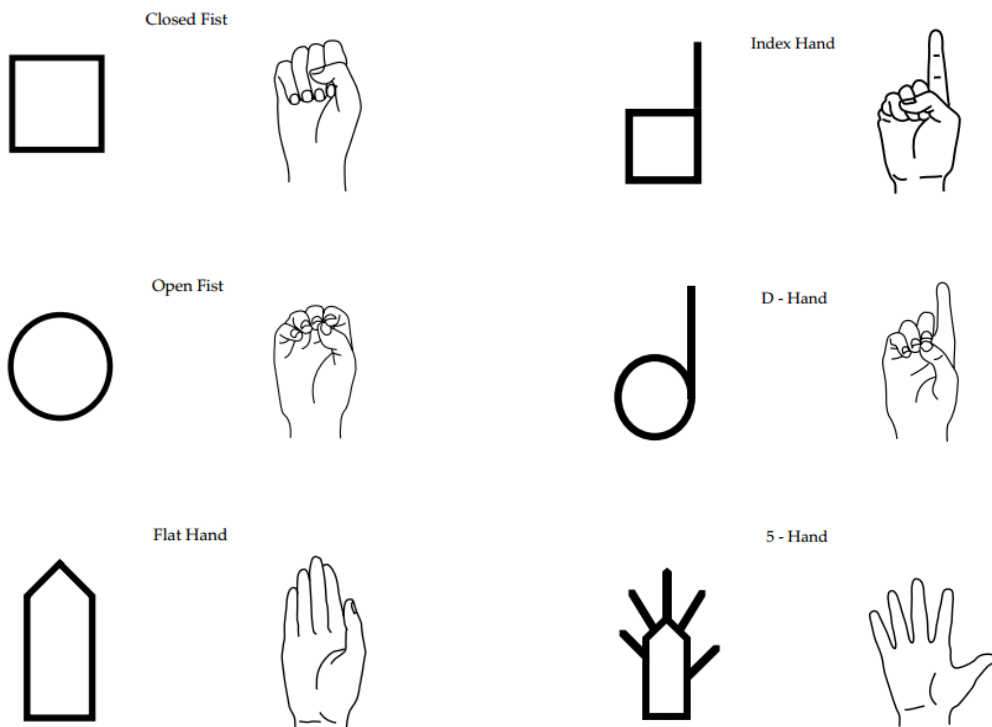
This study of Ethiopian Sign Language has clearly shown that signed languages need more study. Because of the small amount of data available for research, signed languages have been clumped together and universal claims have been made about them. But, if Ethiopian Sign Language has taught me anything, it is that universals should be tested at every chance.

APPENDIX

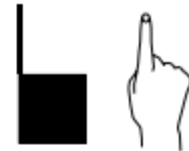
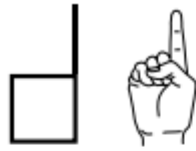
APPENDIX

SignWriting

“SignWriting is a writing system which uses visual symbols to represent the handshapes, movements, and facial expressions of signed languages. It is an "alphabet" - a list of symbols used to write any signed language in the world” (Sutton 1996). See the following figures taken from Sutton’s website about SignWriting for a deeper look at how SignWriting works as a phonetics tool for signed languages. Sutton uses American Sign Language examples to explain SignWriting.



Front View
Hands Parallel With The Wall



argue

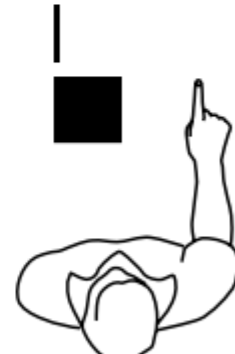
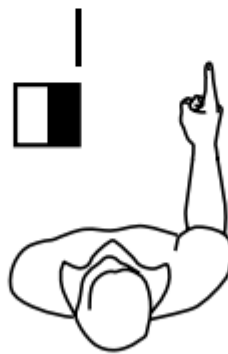


sign



where

Top View
Hands Parallel With The Floor



happen



you

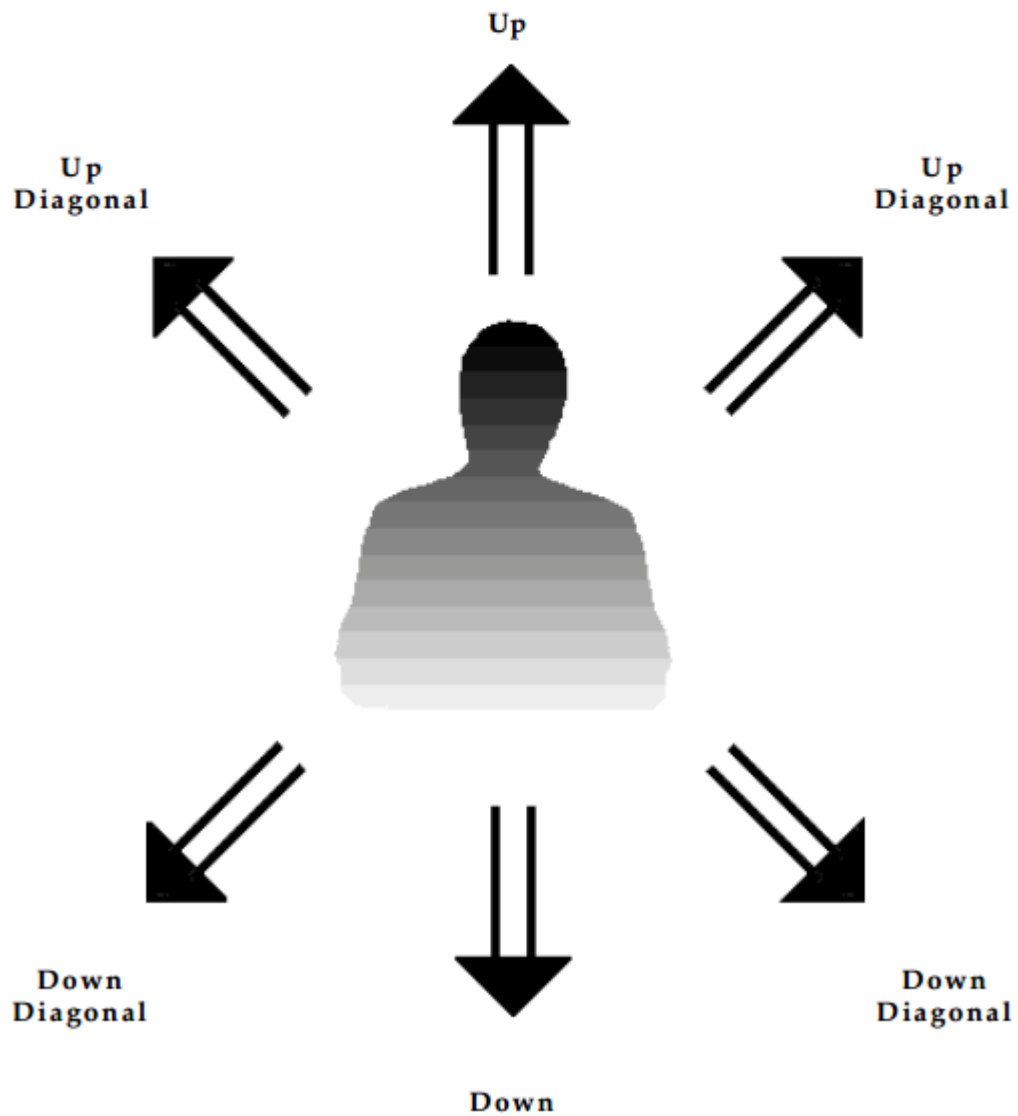


same

Up-Down Movement

Up-Down movement is parallel with the front wall.

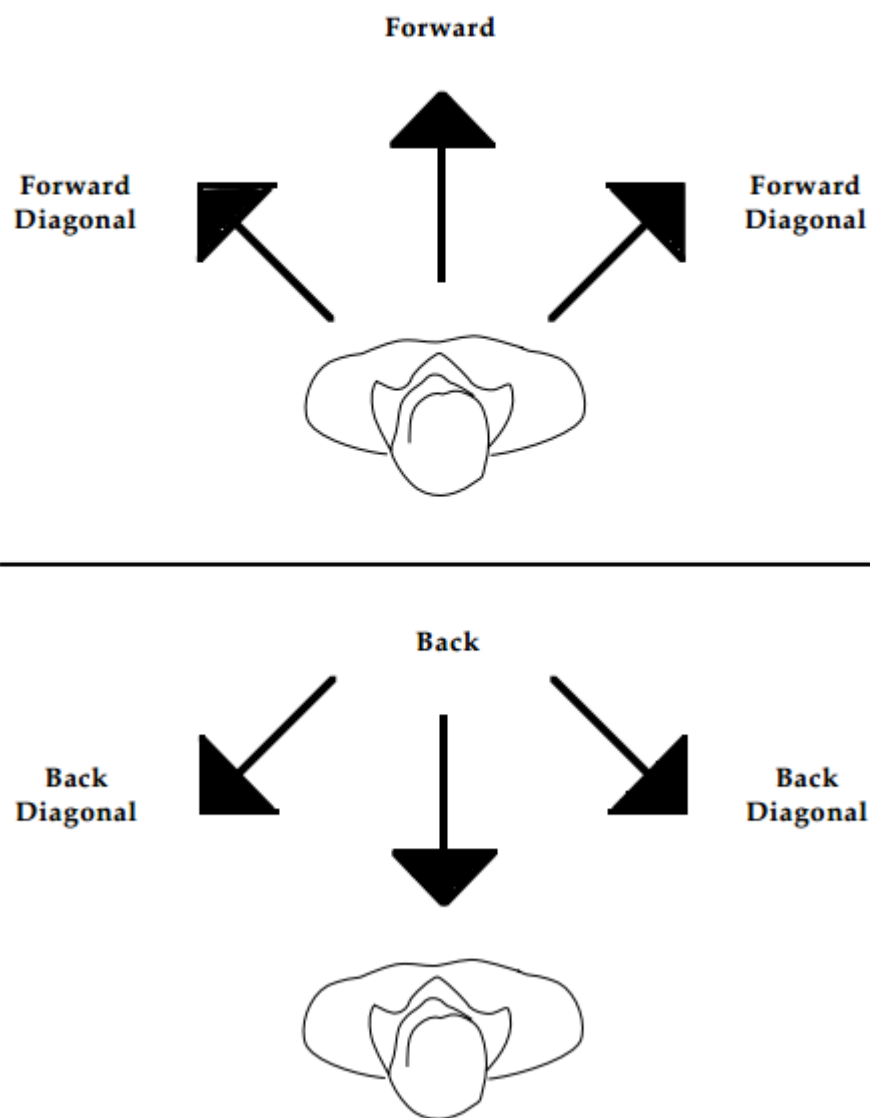
It is written with **double-stemmed** arrows:



Forward-Back Movement

Forward-Back movement is parallel with the floor.

It is written with **single-stemmed** arrows:



REFERENCES

- Aronoff, Mark, Irit Meir, Carol Padden, and Wendy Sandler. 2003. "Classifier Constructions and Morphology in Two Sign Languages." In *Perspectives on Classifier Constructions in Sign Languages*, edited by Karen Emmorey, 53–80. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Emmorey, Karen. 2003. *Perspectives on Classifier Constructions in Sign Languages*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Engberg-Pedersen, Elisabeth. 1993. *Space in Danish Sign Language: The Semantics and Morphosyntax of the Use of Space in a Visual Language*. Hamburg: Signum Verlag.
- Engberg-Pedersen, Elisabeth. 1994. "Some Simultaneous Constructions in Danish Sign Language." In *Word-Order Issues in Sign Language*, edited by Mary Brennan and Graham H. Turner, 73–87. Durham: International Sign Linguistics Association.
- Gray, Beth C. 2018. "The Impact of Translation on Constructed Action and Constructed Dialogue in ASL Texts." M.A. Thesis, Grand Forks, ND: University of North Dakota.
- Grosso, Tamara. 2017. "Referring Forms and Cognitive Status in Non-Narrative American Sign Language Texts." M.A. Thesis, Grand Forks, ND: University of North Dakota.
- Gundel, Jeanette K., Nancy Hedberg, and Ron Zacharski. 1993. "Cognitive Status and the Form of Referring Expressions in Discourse." *Language*, 69:274–307. doi: 10.2307/416535.
- Hendricks, Bernadet. 2008. *Jordanian Sign Language: Aspects of Grammar from a Cross-Linguistic Perspective*. Utrecht: Landelijke Onderzoekschool Taalwetenschap.
- Janzen, Terry. 2004. "Space Rotation, Perspective Shift, and Verb Morphology in ASL." *Cognitive Linguistics*, 149–74.
- Lentz, E. M. 1986. "Teaching Role Shift." In *Proceedings of the Fourth National Symposium on Sign Language Research and Teaching*, edited by Carol Padden. Silver Spring, MD.: National Association of the Deaf.
- Metzger, Melanie. 1995. "Action in American Sign Language." In *Sociolinguistics in Deaf Communities*, edited by Ceil Lucas, 255–71. Washington, D.C.: Gallaudet University Press.

Nyst, Victoria. 2007. *A Descriptive Analysis of Adamorobe Sign Language (Ghana)*. Utrecht: Landelijke Onderzoekschool Taalwetenschap.

Padden, Carol. 1990. "The Relation between Space and Grammar in ASL Morphology." In *Proceedings of the Second International Conference on Theoretical Issues in Sign Language Research*, edited by Ceil Lucas. 118-132. Washington, D.C.: Gallaudet University Press.

Sandler, Wendy, and Diane Lillo-Martin. 2006. *Sign Language and Linguistic Universals*. Cambridge: Cambridge University Press.

Schembri, Adam. 2003. "Rethinking 'classifiers' in Signed Languages." In *Perspectives on Classifier Constructions in Sign Languages*, edited by Emmorey Karen, 3–34. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Stone, Adam. n.d. *Pointy Three*. ASLized! Accessed April 5, 2018.
<https://www.youtube.com/watch?v=kuOT5AAyPa8>.

Sutton, Valerie. 1996. "What Is SignWriting." Accessed July 29, 2018.
<http://www.signwriting.org/about/what/>.

Tamene, Eyasu H. 2016. "Language Use in Ethiopian Sign Language." *Sign Language Studies*, 16:307–29.

Tamene, Eyasu H. 2018. *The Sociolinguistics of Ethiopian Sign Language: A Study of Language Use and Attitudes*. Gallaudet Sociolinguistics Series. Washington D.C.: Gallaudet University Press.